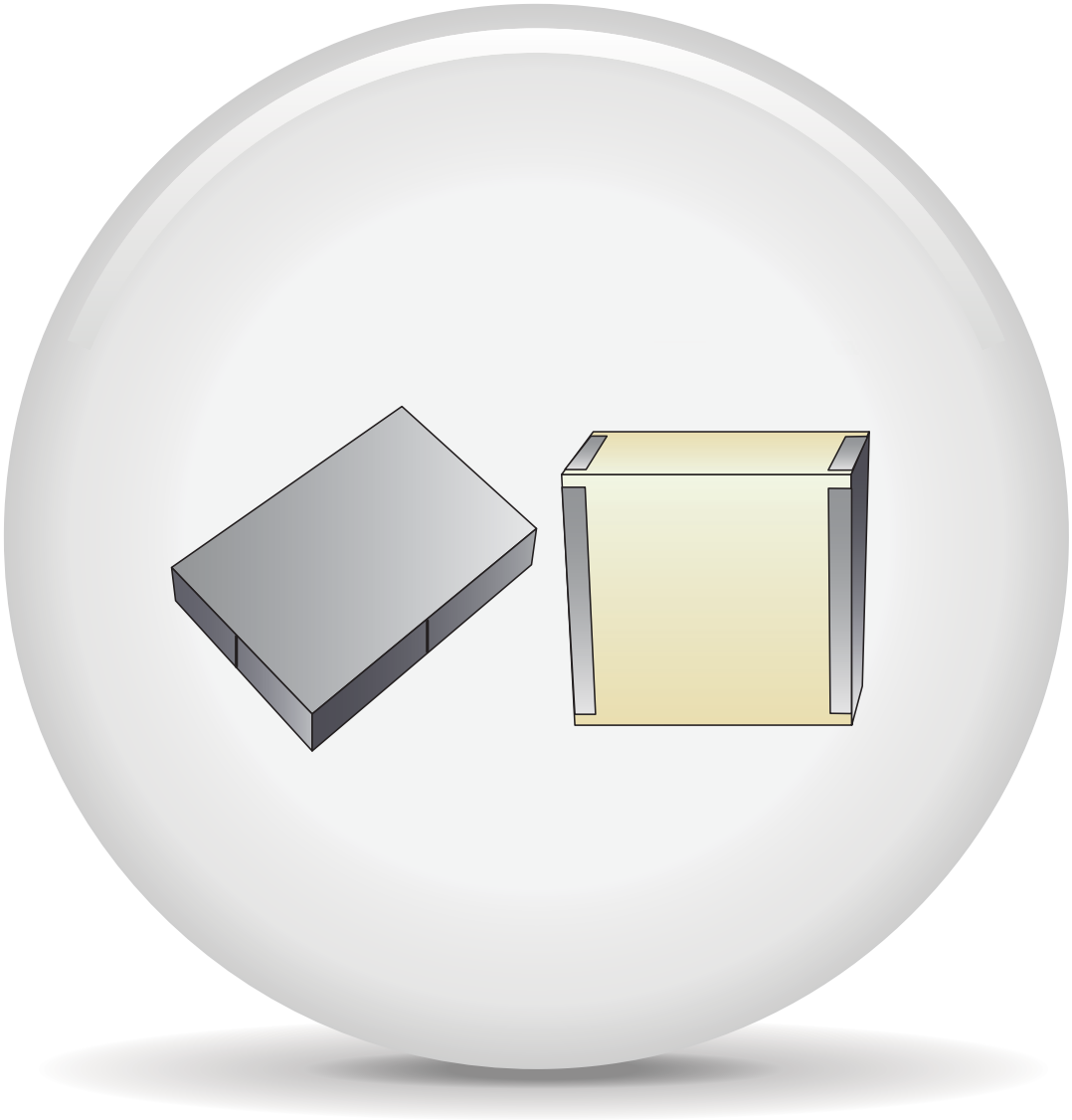
Film Surface Mount Capacitors

General Purpose and High Stability



One world. One KEMET.

Electronic Components
KEMET
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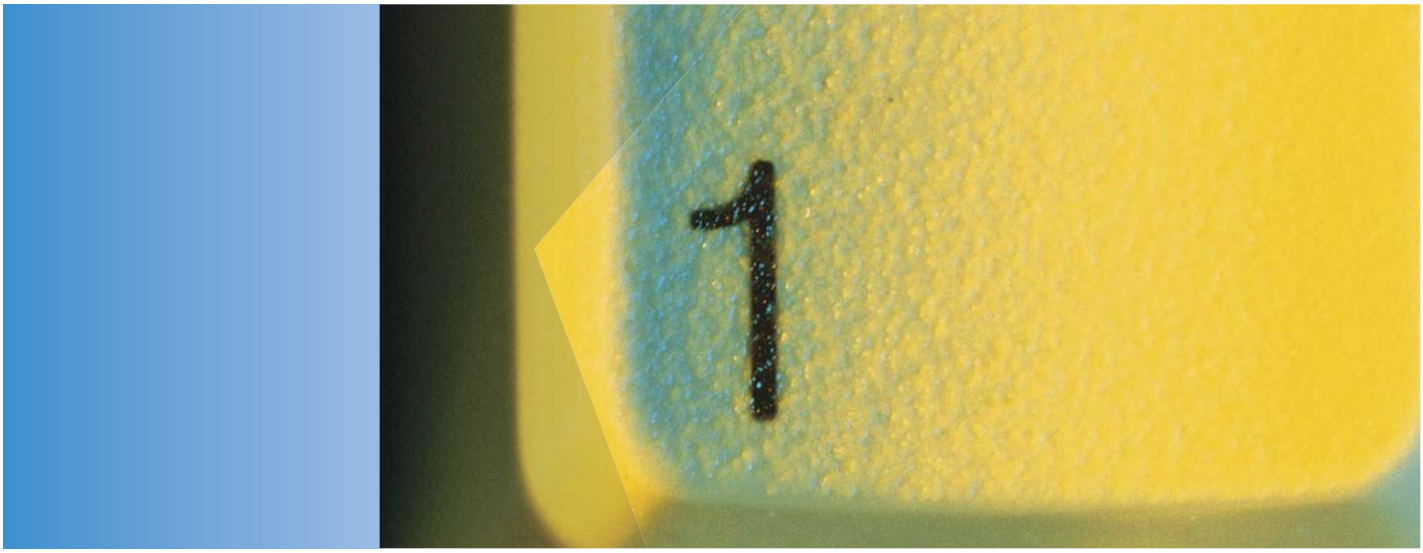


One world. One source. One KEMET.

When you partner with KEMET, our entire global organization provides you with the coordinated service you need. No bouncing from supplier to supplier. No endless phone calls and web browsing. We're your single, integrated source for electronic component solutions worldwide.

Less hassles. More solutions.

Our commitment to product quality and on-time delivery has helped customers succeed for over 90 years. There's a reason KEMET components can be found in defense and aerospace equipment. Our reputation is built on a history of consistency, reliability and service.

The "Easy-to-Buy-From" company.

KEMET offers a level of responsiveness that far surpasses any other supplier. Our passion for customer service is evident throughout our global sales organization, which offers localized support bolstered by our worldwide logistics capabilities. Whether you need rush samples, technical assistance, in-person consultation, accelerated custom design, design collaboration or prototype services, we have a solution.

Made for you.

When you need custom products delivered on a tight schedule, you can trust KEMET. Get direct design consultation from global experts, who help you get the job done on time and within budget.

Working for a better world.

KEMET is dedicated to economically, environmentally and socially sustainable development. We've adopted the Electronic Industry Code of Conduct (EICC) to address all aspects of corporate responsibility. Our manufacturing facilities have won numerous environmental excellence awards and recognitions, and our supply chain is certified. We believe doing the right thing is in everyone's interest.

About KEMET.

KEMET Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry across multiple dielectrics, along with an expanding range of electromechanical devices, and electromagnetic compatibility solutions. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

F161 Series Encapsulated Stacked, Size 2220 – 6560, 50 – 630 VDC (Automotive Grade)

Overview

KEMET's F161 Series polyester (PET) film surface mount capacitor is encapsulated in a self-extinguishing material meeting the requirements of UL 94 V–0. This series meets IEC 60384-19 standards, as well as the demanding Automotive Electronics Council's AEC–Q200 qualification.

Applications

Typical applications include bypassing and signal coupling. F161 is a general purpose series designed for the highest reliability.

Benefits

- Rated voltage: 50 – 630 VDC
- Rated voltage: 30 – 250 VAC
- Capacitance range: 0.01 – 12 µF
- EIA size: 2220 – 6560
- Capacitance tolerance: ±5%, ±10%, ±20%, other tolerances available on request
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of -55˚C to +125˚C
- Automotive grade options available

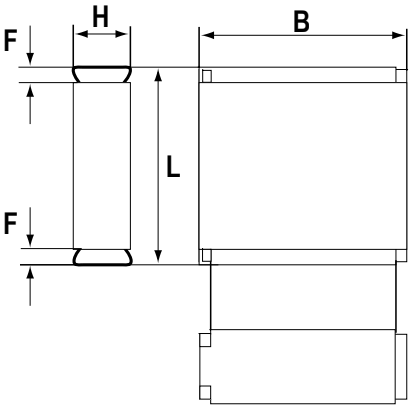
Part Number System

F	161	P	P	103	K	050	V
Capacitor Class	Series	Chip Size	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging Code
F = Film	Metallized Polyester Stacked Technology	P = 2220 S = 2824 W = 4036 Y = 5045 Z = 6560	See Dimension Table	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	J = ±5 K = ±10% M = ±20% Other tolerances on request.	050 = 50 063 = 63 100 = 100 250 = 250 400 = 400 630 = 630	See Ordering Options Table

Ordering Options Table

Chip Size (EIA)	Packaging Type	Packaging Code
2220	**Standard Packaging Options**	
	Tape & Reel (Standard Reel)	V
	Bulk (Bag)	A
2824	**Standard Packaging Options**	
	Tape & Reel (Standard Reel)	V
	Bulk (Bag)	A
4036	**Standard Packaging Options**	
	Tape & Reel (Standard Reel)	V
	Bulk (Bag)	A
	Other Packaging Options	
	Tape & Reel (Vertical Orientation Standard Reel)	Y
5045	**Standard Packaging Options**	
	Tape & Reel (Standard Reel)	V
	Bulk (Bag)	A
	Other Packaging Options	
	Tape & Reel (Vertical Orientation Standard Reel)	Y
6560	**Standard Packaging Options**	
	Tape & Reel (Standard Reel)	V
	Bulk (Bag)	A
	Other Packaging Options	
	Tape & Reel (Vertical Orientation Standard Reel)	Y

Dimensions – Millimeters



Size Code	Chip Size (EIA)	B		H		L		F	
		Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
PP	2220	5.0	+/-0.2	3.0	+/-0.2	5.7	+/-0.2	0.5	Nominal
PU	2220	5.0	+/-0.2	4.0	+/-0.2	5.7	+/-0.2	0.5	Nominal
SL	2824	6.0	+/-0.2	3.0	+/-0.2	7.3	+/-0.2	0.5	Nominal
SP	2824	6.0	+/-0.2	3.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
ST	2824	6.0	+/-0.2	4.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
WP	4036	9.1	+/-0.2	5.5	+/-0.2	10.2	+/-0.2	0.5	Nominal
YR	5045	11.5	+/-0.2	6.5	+/-0.2	12.7	+/-0.2	0.5	Nominal
ZS	6560	15	+/-0.2	7.0	+/-0.2	16.5	+/-0.2	0.5	Nominal

Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

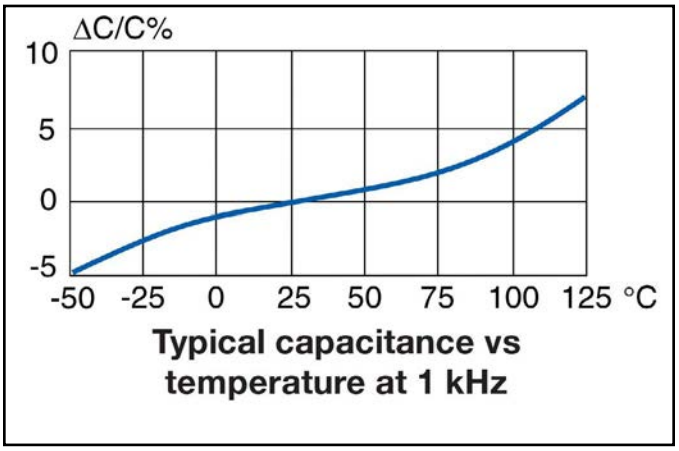
Qualification

Automotive Grade products meet or exceed the requirements outlined by the Automotive Electronics Council. Details regarding test methods and conditions are referenced in document AEC–Q200, Stress Test Qualification for Passive Components. For additional information regarding the Automotive Electronics Council and AEC–Q200, please visit their website at www.aecouncil.com.

Performance Characteristics

Rated Voltage (VDC)	50	63	100	250	400	630
Rated Voltage (VAC)	30	40	63	160	200	250
Capacitance Range (µF)	0.01 – 12	0.01 – 4.7	0.01 – 4.7	0.01 – 1	0.022 – 0.47	0.1 – 0.18
Chip Size (EIA)	2220 – 6560					
Capacitance Tolerance	±5%, ±10%, ±20%; other tolerances available on request					
Category Temperature Range	-55°C to +125°C					
Rated Temperature	+85°C					
Voltage Derating	The rated voltage is decreased with 1.25%/°C from +85°C					
Climatic Category	55/125/56					
Test Voltage	1.6 x V_R, 60 seconds					
Insulation Resistance	Measured at +20°C, Charging Time 1 Minute					
	Minimum Values Between Terminals					
	Charging Voltage		C ≤ 0.33 µF		C > 0.33 µF	
	10 V for V_R ≤ 100		1,000 MΩ		400 MΩ • µF	
	100 v for V_R > 100		1,000 MΩ		400 MΩ • µF	
Dissipation Factor	Maximum Values at +23°C					
		C ≤ 0.1 µF	0.1 < C < 1 µF	1 ≤ C ≤ 10 µF	C > 10 µF	
	1 kHz	0.8%	0.8%	0.8%	0.8%	
	10 kHz	1.2%	1.2%	1.5%	3.0%	
	100 kHz	2.5%	3.0%			
Maximum Pulse Rise Time	The capacitors can withstand an unlimited number of pulses with a dV/dt according to Table below.					
Voltage Range	50 VDC	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC
dV/dt (V/µs)	40	40	50	150	200	250

Capacitance vs. Temperature



Dissipation Factor vs. Temperature

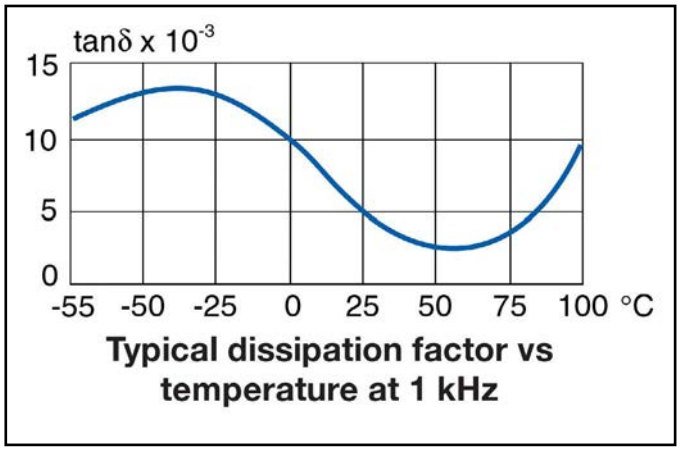


Table 1 – Ratings & Part Number Reference

VDC	VAC	Capacitance Value (µF)	Chip Size	Dimension in mm			dV/dt (V/µs)	Part Number
				B	H	L		
50	30	0.01	2220	5.0	3.0	5.7	40	F161PP103(1)050(2)
50	30	0.012	2220	5.0	3.0	5.7	40	F161PP123(1)050(2)
50	30	0.015	2220	5.0	3.0	5.7	40	F161PP153(1)050(2)
50	30	0.018	2220	5.0	3.0	5.7	40	F161PP183(1)050(2)
50	30	0.022	2220	5.0	3.0	5.7	40	F161PP223(1)050(2)
50	30	0.027	2220	5.0	3.0	5.7	40	F161PP273(1)050(2)
50	30	0.033	2220	5.0	3.0	5.7	40	F161PP333(1)050(2)
50	30	0.039	2220	5.0	3.0	5.7	40	F161PP393(1)050(2)
50	30	0.047	2220	5.0	3.0	5.7	40	F161PP473(1)050(2)
50	30	0.056	2220	5.0	3.0	5.7	40	F161PP563(1)050(2)
50	30	0.068	2220	5.0	3.0	5.7	40	F161PP683(1)050(2)
50	30	0.082	2220	5.0	3.0	5.7	40	F161PP823(1)050(2)
50	30	0.1	2220	5.0	3.0	5.7	40	F161PP104(1)050(2)
50	30	0.12	2220	5.0	3.0	5.7	40	F161PP124(1)050(2)
50	30	0.15	2220	5.0	3.0	5.7	40	F161PP154(1)050(2)
50	30	0.18	2220	5.0	4.0	5.7	40	F161PU184(1)050(2)
50	30	0.22	2220	5.0	4.0	5.7	40	F161PU224(1)050(2)
50	30	0.01	2824	6.0	3.0	7.3	40	F161SL103(1)050(2)
50	30	0.012	2824	6.0	3.0	7.3	40	F161SL123(1)050(2)
50	30	0.015	2824	6.0	3.0	7.3	40	F161SL153(1)050(2)
50	30	0.018	2824	6.0	3.0	7.3	40	F161SL183(1)050(2)
50	30	0.022	2824	6.0	3.0	7.3	40	F161SL223(1)050(2)
50	30	0.027	2824	6.0	3.0	7.3	40	F161SL273(1)050(2)
50	30	0.033	2824	6.0	3.0	7.3	40	F161SL333(1)050(2)
50	30	0.039	2824	6.0	3.0	7.3	40	F161SL393(1)050(2)
50	30	0.047	2824	6.0	3.0	7.3	40	F161SL473(1)050(2)
50	30	0.056	2824	6.0	3.0	7.3	40	F161SL563(1)050(2)
50	30	0.068	2824	6.0	3.0	7.3	40	F161SL683(1)050(2)
50	30	0.082	2824	6.0	3.0	7.3	40	F161SL823(1)050(2)
50	30	0.1	2824	6.0	3.0	7.3	40	F161SL104(1)050(2)
50	30	0.12	2824	6.0	3.0	7.3	40	F161SL124(1)050(2)
50	30	0.15	2824	6.0	3.0	7.3	40	F161SL154(1)050(2)
50	30	0.18	2824	6.0	3.0	7.3	40	F161SL184(1)050(2)
50	30	0.22	2824	6.0	3.0	7.3	40	F161SL224(1)050(2)
50	30	0.27	2824	6.0	3.5	7.3	40	F161SP274(1)050(2)
50	30	0.33	2824	6.0	3.5	7.3	40	F161SP334(1)050(2)
50	30	0.39	2824	6.0	3.5	7.3	40	F161SP394(1)050(2)
50	30	0.47	2824	6.0	3.5	7.3	40	F161SP474(1)050(2)
50	30	0.56	2824	6.0	4.5	7.3	40	F161ST564(1)050(2)
50	30	0.68	2824	6.0	4.5	7.3	40	F161ST684(1)050(2)
50	30	0.82	2824	6.0	4.5	7.3	40	F161ST824(1)050(2)
50	30	1	2824	6.0	4.5	7.3	40	F161ST105(1)050(2)
50	30	0.022	4036	9.1	5.5	10.2	40	F161WP223(1)050(2)
50	30	0.027	4036	9.1	5.5	10.2	40	F161WP273(1)050(2)
50	30	0.033	4036	9.1	5.5	10.2	40	F161WP333(1)050(2)
50	30	0.039	4036	9.1	5.5	10.2	40	F161WP393(1)050(2)
50	30	0.047	4036	9.1	5.5	10.2	40	F161WP473(1)050(2)
50	30	0.056	4036	9.1	5.5	10.2	40	F161WP563(1)050(2)
50	30	0.068	4036	9.1	5.5	10.2	40	F161WP683(1)050(2)
50	30	0.082	4036	9.1	5.5	10.2	40	F161WP823(1)050(2)
50	30	0.1	4036	9.1	5.5	10.2	40	F161WP104(1)050(2)
50	30	0.12	4036	9.1	5.5	10.2	40	F161WP124(1)050(2)
50	30	0.15	4036	9.1	5.5	10.2	40	F161WP154(1)050(2)
50	30	0.18	4036	9.1	5.5	10.2	40	F161WP184(1)050(2)
50	30	0.22	4036	9.1	5.5	10.2	40	F161WP224(1)050(2)
50	30	0.27	4036	9.1	5.5	10.2	40	F161WP274(1)050(2)
50	30	0.33	4036	9.1	5.5	10.2	40	F161WP334(1)050(2)
50	30	0.39	4036	9.1	5.5	10.2	40	F161WP394(1)050(2)
50	30	0.47	4036	9.1	5.5	10.2	40	F161WP474(1)050(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (Vµs)**	**Part Number**

(1) J = ±5%, K = ±10%, M = ±20%, other tolerances on request.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Chip Size	Dimension in mm			dV/dt (V/µs)	Part Number
				B	H	L		
50	30	0.56	4036	9.1	5.5	10.2	40	F161WP564(1)050(2)
50	30	0.68	4036	9.1	5.5	10.2	40	F161WP684(1)050(2)
50	30	0.82	4036	9.1	5.5	10.2	40	F161WP824(1)050(2)
50	30	1	4036	9.1	5.5	10.2	40	F161WP105(1)050(2)
50	30	1.2	4036	9.1	5.5	10.2	40	F161WP125(1)050(2)
50	30	1.5	4036	9.1	5.5	10.2	40	F161WP155(1)050(2)
50	30	1.8	4036	9.1	5.5	10.2	40	F161WP185(1)050(2)
50	30	2.2	4036	9.1	5.5	10.2	40	F161WP225(1)050(2)
50	30	2.7	5045	11.5	6.5	12.7	40	F161YR275(1)050(2)
50	30	3.3	5045	11.5	6.5	12.7	40	F161YR335(1)050(2)
50	30	3.9	5045	11.5	6.5	12.7	40	F161YR395(1)050(2)
50	30	4.7	5045	11.5	6.5	12.7	40	F161YR475(1)050(2)
50	30	5.6	6560	15.0	7.0	16.5	40	F161ZS565(1)050(2)
50	30	6.8	6560	15.0	7.0	16.5	40	F161ZS685(1)050(2)
50	30	8.2	6560	15.0	7.0	16.5	40	F161ZS825(1)050(2)
50	30	10	6560	15.0	7.0	16.5	40	F161ZS106(1)050(2)
50	30	12	6560	15.0	7.0	16.5	40	F161ZS126(1)050(2)
63	40	0.01	2824	6.0	3.0	7.3	40	F161SL103(1)063(2)
63	40	0.012	2824	6.0	3.0	7.3	40	F161SL123(1)063(2)
63	40	0.015	2824	6.0	3.0	7.3	40	F161SL153(1)063(2)
63	40	0.018	2824	6.0	3.0	7.3	40	F161SL183(1)063(2)
63	40	0.022	2824	6.0	3.0	7.3	40	F161SL223(1)063(2)
63	40	0.027	2824	6.0	3.0	7.3	40	F161SL273(1)063(2)
63	40	0.033	2824	6.0	3.0	7.3	40	F161SL333(1)063(2)
63	40	0.039	2824	6.0	3.0	7.3	40	F161SL393(1)063(2)
63	40	0.047	2824	6.0	3.0	7.3	40	F161SL473(1)063(2)
63	40	0.056	2824	6.0	3.0	7.3	40	F161SL563(1)063(2)
63	40	0.068	2824	6.0	3.0	7.3	40	F161SL683(1)063(2)
63	40	0.082	2824	6.0	3.0	7.3	40	F161SL823(1)063(2)
63	40	0.1	2824	6.0	3.0	7.3	40	F161SL104(1)063(2)
63	40	0.12	2824	6.0	3.0	7.3	40	F161SL124(1)063(2)
63	40	0.15	2824	6.0	3.0	7.3	40	F161SL154(1)063(2)
63	40	0.18	2824	6.0	3.0	7.3	40	F161SL184(1)063(2)
63	40	0.22	2824	6.0	3.0	7.3	40	F161SL224(1)063(2)
63	40	0.27	2824	6.0	3.5	7.3	40	F161SP274(1)063(2)
63	40	0.33	2824	6.0	3.5	7.3	40	F161SP334(1)063(2)
63	40	0.39	2824	6.0	3.5	7.3	40	F161SP394(1)063(2)
63	40	0.47	2824	6.0	3.5	7.3	40	F161SP474(1)063(2)
63	40	0.022	4036	9.1	5.5	10.2	40	F161WP223(1)063(2)
63	40	0.027	4036	9.1	5.5	10.2	40	F161WP273(1)063(2)
63	40	0.033	4036	9.1	5.5	10.2	40	F161WP333(1)063(2)
63	40	0.039	4036	9.1	5.5	10.2	40	F161WP393(1)063(2)
63	40	0.047	4036	9.1	5.5	10.2	40	F161WP473(1)063(2)
63	40	0.056	4036	9.1	5.5	10.2	40	F161WP563(1)063(2)
63	40	0.068	4036	9.1	5.5	10.2	40	F161WP683(1)063(2)
63	40	0.082	4036	9.1	5.5	10.2	40	F161WP823(1)063(2)
63	40	0.1	4036	9.1	5.5	10.2	40	F161WP104(1)063(2)
63	40	0.12	4036	9.1	5.5	10.2	40	F161WP124(1)063(2)
63	40	0.15	4036	9.1	5.5	10.2	40	F161WP154(1)063(2)
63	40	0.18	4036	9.1	5.5	10.2	40	F161WP184(1)063(2)
63	40	0.22	4036	9.1	5.5	10.2	40	F161WP224(1)063(2)
63	40	0.27	4036	9.1	5.5	10.2	40	F161WP274(1)063(2)
63	40	0.33	4036	9.1	5.5	10.2	40	F161WP334(1)063(2)
63	40	0.39	4036	9.1	5.5	10.2	40	F161WP394(1)063(2)
63	40	0.47	4036	9.1	5.5	10.2	40	F161WP474(1)063(2)
63	40	0.56	4036	9.1	5.5	10.2	40	F161WP564(1)063(2)
63	40	0.68	4036	9.1	5.5	10.2	40	F161WP684(1)063(2)
63	40	0.82	4036	9.1	5.5	10.2	40	F161WP824(1)063(2)
63	40	1	4036	9.1	5.5	10.2	40	F161WP105(1)063(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (Vµs)**	**Part Number**

(1) J = ±5%, K = ±10%, M = ±20%, other tolerances on request.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Chip Size	Dimension in mm			dV/dt (V/µs)	Part Number
				B	H	L		
63	40	1.2	4036	9.1	5.5	10.2	40	F161WP125(1)063(2)
63	40	1.5	4036	9.1	5.5	10.2	40	F161WP155(1)063(2)
63	40	1.8	5045	11.5	6.5	12.7	40	F161YR185(1)063(2)
63	40	2.2	5045	11.5	6.5	12.7	40	F161YR225(1)063(2)
63	40	2.7	5045	11.5	6.5	12.7	40	F161YR275(1)063(2)
63	40	3.3	5045	11.5	6.5	12.7	40	F161YR335(1)063(2)
63	40	3.9	6560	15.0	7.0	16.5	40	F161ZS395(1)063(2)
63	40	4.7	6560	15.0	7.0	16.5	40	F161ZS475(1)063(2)
100	63	0.01	2220	5.0	3.0	5.7	50	F161PP103(1)100(2)
100	63	0.012	2220	5.0	3.0	5.7	50	F161PP123(1)100(2)
100	63	0.015	2220	5.0	3.0	5.7	50	F161PP153(1)100(2)
100	63	0.018	2220	5.0	3.0	5.7	50	F161PP183(1)100(2)
100	63	0.022	2220	5.0	3.0	5.7	50	F161PP223(1)100(2)
100	63	0.027	2220	5.0	3.0	5.7	50	F161PP273(1)100(2)
100	63	0.033	2220	5.0	3.0	5.7	50	F161PP333(1)100(2)
100	63	0.039	2220	5.0	3.0	5.7	50	F161PP393(1)100(2)
100	63	0.047	2220	5.0	3.0	5.7	50	F161PP473(1)100(2)
100	63	0.056	2220	5.0	3.0	5.7	50	F161PP563(1)100(2)
100	63	0.068	2220	5.0	3.0	5.7	50	F161PP683(1)100(2)
100	63	0.082	2220	5.0	4.0	5.7	50	F161PU823(1)100(2)
100	63	0.1	2220	5.0	4.0	5.7	50	F161PU104(1)100(2)
100	63	0.01	2824	6.0	3.0	7.3	50	F161SL103(1)100(2)
100	63	0.012	2824	6.0	3.0	7.3	50	F161SL123(1)100(2)
100	63	0.015	2824	6.0	3.0	7.3	50	F161SL153(1)100(2)
100	63	0.018	2824	6.0	3.0	7.3	50	F161SL183(1)100(2)
100	63	0.022	2824	6.0	3.0	7.3	50	F161SL223(1)100(2)
100	63	0.027	2824	6.0	3.0	7.3	50	F161SL273(1)100(2)
100	63	0.033	2824	6.0	3.0	7.3	50	F161SL333(1)100(2)
100	63	0.039	2824	6.0	3.0	7.3	50	F161SL393(1)100(2)
100	63	0.047	2824	6.0	3.0	7.3	50	F161SL473(1)100(2)
100	63	0.056	2824	6.0	3.0	7.3	50	F161SL563(1)100(2)
100	63	0.068	2824	6.0	3.0	7.3	50	F161SL683(1)100(2)
100	63	0.082	2824	6.0	3.0	7.3	50	F161SL823(1)100(2)
100	63	0.1	2824	6.0	3.0	7.3	50	F161SL104(1)100(2)
100	63	0.12	2824	6.0	3.0	7.3	50	F161SL124(1)100(2)
100	63	0.15	2824	6.0	3.5	7.3	50	F161SP154(1)100(2)
100	63	0.18	2824	6.0	3.5	7.3	50	F161SP184(1)100(2)
100	63	0.22	2824	6.0	4.5	7.3	50	F161ST224(1)100(2)
100	63	0.022	4036	9.1	5.5	10.2	50	F161WP223(1)100(2)
100	63	0.027	4036	9.1	5.5	10.2	50	F161WP273(1)100(2)
100	63	0.033	4036	9.1	5.5	10.2	50	F161WP333(1)100(2)
100	63	0.039	4036	9.1	5.5	10.2	50	F161WP393(1)100(2)
100	63	0.047	4036	9.1	5.5	10.2	50	F161WP473(1)100(2)
100	63	0.056	4036	9.1	5.5	10.2	50	F161WP563(1)100(2)
100	63	0.068	4036	9.1	5.5	10.2	50	F161WP683(1)100(2)
100	63	0.082	4036	9.1	5.5	10.2	50	F161WP823(1)100(2)
100	63	0.1	4036	9.1	5.5	10.2	50	F161WP104(1)100(2)
100	63	0.12	4036	9.1	5.5	10.2	50	F161WP124(1)100(2)
100	63	0.15	4036	9.1	5.5	10.2	50	F161WP154(1)100(2)
100	63	0.18	4036	9.1	5.5	10.2	50	F161WP184(1)100(2)
100	63	0.22	4036	9.1	5.5	10.2	50	F161WP224(1)100(2)
100	63	0.27	4036	9.1	5.5	10.2	50	F161WP274(1)100(2)
100	63	0.33	4036	9.1	5.5	10.2	50	F161WP334(1)100(2)
100	63	0.39	4036	9.1	5.5	10.2	50	F161WP394(1)100(2)
100	63	0.47	4036	9.1	5.5	10.2	50	F161WP474(1)100(2)
100	63	0.56	4036	9.1	5.5	10.2	50	F161WP564(1)100(2)
100	63	0.68	4036	9.1	5.5	10.2	50	F161WP684(1)100(2)
100	63	0.82	4036	9.1	5.5	10.2	50	F161WP824(1)100(2)
100	63	1	4036	9.1	5.5	10.2	50	F161WP105(1)100(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (Vµs)**	**Part Number**

(1) J = ±5%, K = ±10%, M = ±20%, other tolerances on request.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

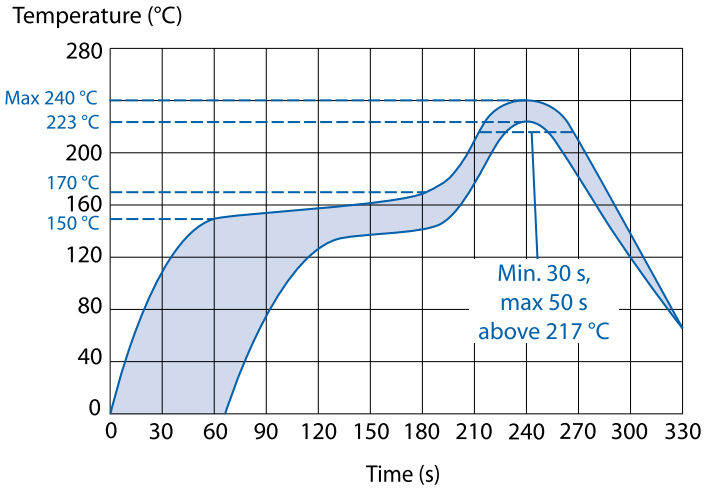
VDC	VAC	Capacitance Value (µF)	Chip Size	Dimension in mm			dV/dt (V/µs)	Part Number
				B	H	L		
100	63	1.2	5045	11.5	6.5	12.7	50	F161YR125(1)100(2)
100	63	1.5	5045	11.5	6.5	12.7	50	F161YR155(1)100(2)
100	63	1.8	5045	11.5	6.5	12.7	50	F161YR185(1)100(2)
100	63	2.2	6560	15.0	7.0	16.5	50	F161ZS225(1)100(2)
100	63	2.7	6560	15.0	7.0	16.5	50	F161ZS275(1)100(2)
100	63	3.3	6560	15.0	7.0	16.5	50	F161ZS335(1)100(2)
100	63	3.9	6560	15.0	7.0	16.5	50	F161ZS395(1)100(2)
100	63	4.7	6560	15.0	7.0	16.5	50	F161ZS475(1)100(2)
250	160	0.01	2824	6.0	3.0	7.3	150	F161SL103(1)250(2)
250	160	0.012	2824	6.0	3.0	7.3	150	F161SL123(1)250(2)
250	160	0.015	2824	6.0	3.0	7.3	150	F161SL153(1)250(2)
250	160	0.018	2824	6.0	3.0	7.3	150	F161SL183(1)250(2)
250	160	0.022	2824	6.0	3.0	7.3	150	F161SL223(1)250(2)
250	160	0.027	2824	6.0	3.5	7.3	150	F161SP273(1)250(2)
250	160	0.033	2824	6.0	3.5	7.3	150	F161SP333(1)250(2)
250	160	0.039	2824	6.0	3.5	7.3	150	F161SP393(1)250(2)
250	160	0.047	2824	6.0	4.5	7.3	150	F161ST473(1)250(2)
250	160	0.022	4036	9.1	5.5	10.2	150	F161WP223(1)250(2)
250	160	0.027	4036	9.1	5.5	10.2	150	F161WP273(1)250(2)
250	160	0.033	4036	9.1	5.5	10.2	150	F161WP333(1)250(2)
250	160	0.039	4036	9.1	5.5	10.2	150	F161WP393(1)250(2)
250	160	0.047	4036	9.1	5.5	10.2	150	F161WP473(1)250(2)
250	160	0.056	4036	9.1	5.5	10.2	150	F161WP563(1)250(2)
250	160	0.068	4036	9.1	5.5	10.2	150	F161WP683(1)250(2)
250	160	0.082	4036	9.1	5.5	10.2	150	F161WP823(1)250(2)
250	160	0.1	4036	9.1	5.5	10.2	150	F161WP104(1)250(2)
250	160	0.12	4036	9.1	5.5	10.2	150	F161WP124(1)250(2)
250	160	0.15	4036	9.1	5.5	10.2	150	F161WP154(1)250(2)
250	160	0.18	4036	9.1	5.5	10.2	150	F161WP184(1)250(2)
250	160	0.22	4036	9.1	5.5	10.2	150	F161WP224(1)250(2)
250	160	0.27	5045	11.5	6.5	12.7	150	F161YR274(1)250(2)
250	160	0.33	5045	11.5	6.5	12.7	150	F161YR334(1)250(2)
250	160	0.39	5045	11.5	6.5	12.7	150	F161YR394(1)250(2)
250	160	0.47	5045	11.5	6.5	12.7	150	F161YR474(1)250(2)
250	160	0.56	6560	15.0	7.0	16.5	150	F161ZS564(1)250(2)
250	160	0.68	6560	15.0	7.0	16.5	150	F161ZS684(1)250(2)
250	160	0.82	6560	15.0	7.0	16.5	150	F161ZS824(1)250(2)
250	160	1	6560	15.0	7.0	16.5	150	F161ZS105(1)250(2)
400	200	0.022	4036	9.1	5.5	10.2	200	F161WP223(1)400(2)
400	200	0.027	4036	9.1	5.5	10.2	200	F161WP273(1)400(2)
400	200	0.033	4036	9.1	5.5	10.2	200	F161WP333(1)400(2)
400	200	0.039	4036	9.1	5.5	10.2	200	F161WP393(1)400(2)
400	200	0.047	4036	9.1	5.5	10.2	200	F161WP473(1)400(2)
400	200	0.056	4036	9.1	5.5	10.2	200	F161WP563(1)400(2)
400	200	0.068	4036	9.1	5.5	10.2	200	F161WP683(1)400(2)
400	200	0.082	5045	9.1	5.5	10.2	200	F161WP823(1)400(2)
400	200	0.1	5045	11.5	6.5	12.7	200	F161YR104(1)400(2)
400	200	0.12	5045	11.5	6.5	12.7	200	F161YR124(1)400(2)
400	200	0.15	5045	11.5	6.5	12.7	200	F161YR154(1)400(2)
400	200	0.18	5045	11.5	6.5	12.7	200	F161YR184(1)400(2)
400	200	0.22	6560	15.0	7.0	16.5	200	F161ZS224(1)400(2)
400	200	0.27	6560	15.0	7.0	16.5	200	F161ZS274(1)400(2)
400	200	0.33	6560	15.0	7.0	16.5	200	F161ZS334(1)400(2)
400	200	0.39	6560	15.0	7.0	16.5	200	F161ZS394(1)400(2)
400	200	0.47	6560	15.0	7.0	16.5	200	F161ZS474(1)400(2)
630	250	0.1	6560	15.0	7.0	16.5	250	F161ZS104(1)630(2)
630	250	0.12	6560	15.0	7.0	16.5	250	F161ZS124(1)630(2)
630	250	0.15	6560	15.0	7.0	16.5	250	F161ZS154(1)630(2)
630	250	0.18	6560	15.0	7.0	16.5	250	F161ZS184(1)630(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (Vµs)**	**Part Number**

(1) J = ±5%, K = ±10%, M = ±20%, other tolerances on request.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Soldering Process

Reflow soldering temperature is measured on the top surface of the component: Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 240°C.



Marking

- Capacitance
- Capacitance tolerance code
- Rated voltage code
- Capacitor type N for F161
- Manufacturing date code

Rated Voltage	Code
50 VDC	Z
63 VDC	C
100 VDC	D
250 VDC	H
400 VDC	K
630 VCD	M

Manufacturing Date Code (IEC 60062)			
Y = Year, Z = Month			
Year	**Code**	**Month**	**Code**
2000	M	January	1
2001	N	February	2
2002	P	March	3
2003	R	April	4
2004	S	May	5
2005	T	June	6
2006	U	July	7
2007	V	August	8
2008	W	September	9
2009	X	October	O
2010	A	November	N
2011	B	December	D
2012	C		
2013	D		
2014	E		
2015	F		
2016	H		
2017	J		
2018	K		
2019	L		
2020	M		

Flux & Cleaning

KEMET recommends to use a no-clean flux with a halogen content lower than 0.1%.
To clean the PCB assembly KEMET recommends to use a suitable solvent like Isopropyl alcohol, deionized water or neutral pH detergents. Aggressive solvents shall not be used. For any different cleaning solvent used please contact KEMET Technical Services to analyze the potential impact on KEMET products.

Storage and Moisture Recommendations

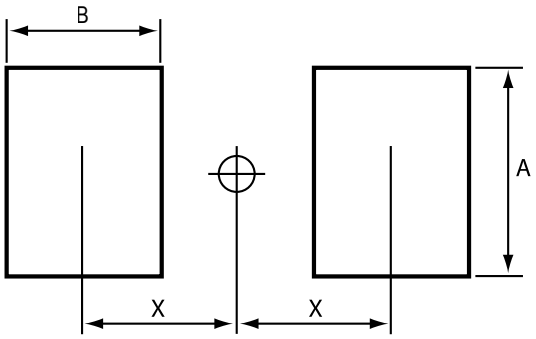
KEMET SMD Film Capacitors are supplied in a MBB (Moisture Barrier Bag) Class 1. We can guarantee a 24 months shelf life (temperature ≤ 40°C/relative humidity ≤ 90%). After the MBB has been opened, components may stay in areas with controlled temperature and humidity (temperature ≤ 30°C/relative humidity ≤ 60%) for 168 hours [MSL 3]. For longer periods of time and/or higher temperature and/or higher relative humidity values, it is absolutely necessary to protect the components against humidity. If the reel inside the MBB is partially used, KEMET recommends to re-use the same MBB or to avoid areas without controlled temperature and humidity (see above). If the above conditions are not respected, components require a baking (minimum time: 48 hours at 55 ± 5°C) before the reflow.

Packaging Quantities

Chip Size (EIA)	Size Code	Base (mm)	Height (mm)	Length (mm)	Bulk	Reel Horizontal Orientation	Reel Vertical Orientation
2220	PP	5	3	5.7	2000	2400	
2220	PU	5	4	5.7	2000	2100	
2824	SL	6	3	7.3	2000	2500	
2824	SP	6	3.5	7.3	2000	2300	
2824	ST	6	4.5	7.3	1000	1700	
4036	WP	9.1	5.5	10.2	1000	800	500
5045	YR	11.5	6.5	12.7	1000	600	400
6560	ZS	15	7	16.5	800	500	200

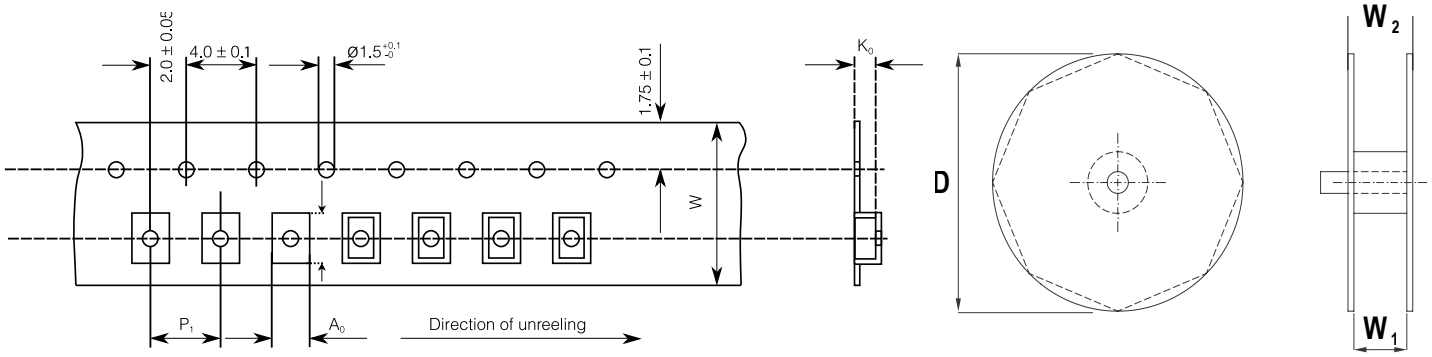
Landing

Mounting	Chip Size	Dimensions in mm		
		A	B	X
Horizontal	2220	5.1	1.5	3.0
	2824	6.1	1.5	3.8
	4036	9.1	2.0	5.5
	5045	11.6	2.5	7.0
	6560	15.0	3.0	9.0
Vertical	4022	5.6	2.0	5.5
	5026	6.6	2.5	7.0
	6528	7.1	3.0	9.0



Carrier Taping & Packaging (IEC 60286–2)

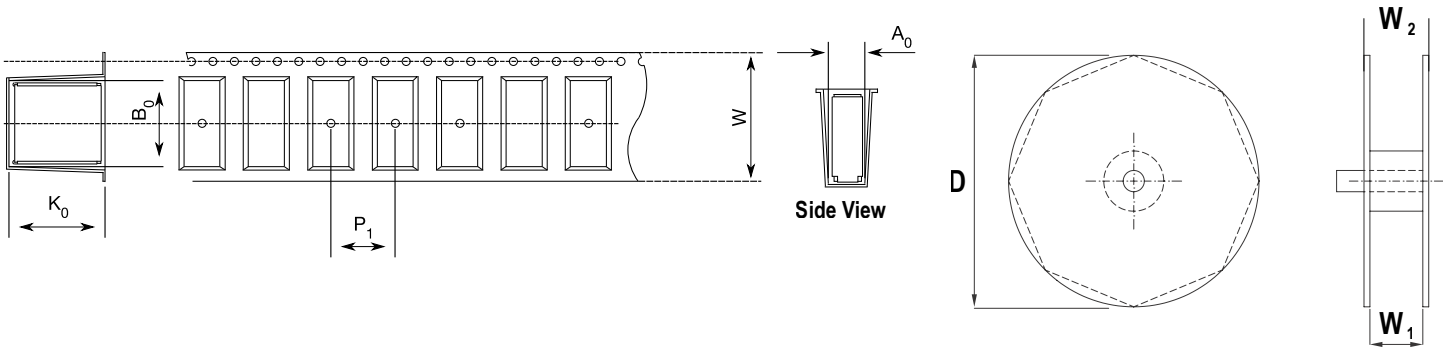
Horizontal Taping Orientation



EIA Size Code Horizontal Mounting	Size Code	Dimensions in mm			Taping Specification							
		B	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
		Nominal	Nominal	Nominal	-0/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
2220	PP	5.0	3.0	5.7	12.0	8.0	5.5	6.0	3.3	330	12.4	22.0
2220	PU	5.0	4.0	5.7	12.0	8.0	5.5	6.0	4.3	330	12.4	22.0
2824	SL	6.0	3.0	7.3	12.0	8.0	6.5	7.5	3.3	330	12.4	22.0
2824	SP	6.0	3.5	7.3	12.0	8.0	6.5	7.5	3.8	330	12.4	22.0
2824	ST	6.0	4.5	7.3	12.0	8.0	6.5	7.5	4.8	330	12.4	22.0
4036	WP	9.1	5.5	10.2	16.0	16.0	9.5	10.5	5.8	330	16.4	22.0
5045	YR	11.5	6.5	12.7	24.0	16.0	11.9	13.1	6.8	330	24.4	30.0
6560	ZS	15.0	7.0	16.5	24.0	20.0	15.4	16.8	7.3	330	24.4	30.0

Carrier Taping & Packaging (IEC 60286–2) cont'd

Vertical Taping Orientation



Size Code Vertical Mounting	Size Code	Dimensions in mm			Taping Specification							
		B	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
		Nominal	Nominal	Nominal	-0/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
4022	WP	5.5	9.1	10.2	24.0	16.0	6.0	10.5	9.3	330	24.4	30.0
5026	YR	6.5	11.5	12.7	24.0	16.0	6.9	13.1	11.8	330	24.4	30.0
6528	ZS	7.0	15.0	16.5	44.0	20.0	7.5	17.0	15.3	330	44.5	49.5

Note: Chip dimensions B and H correspond to dimensions H and B in the horizontal mounting table.

MDC Series Dual In-Line, 50 – 630 VDC, High Current

Overview

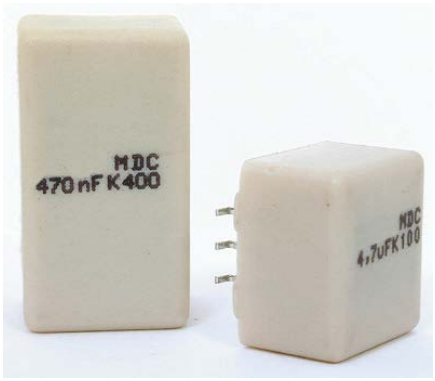
Dual in-line (DIL) metallized polyester (PET) film capacitor for surface mounting. Encapsulation in self-extinguishing material meeting the requirements of UL 94 V–0.

Applications

Typical applications include high frequency switched-mode power supplies, DC/DC converters and input/output filtering.

Benefits

- Rated voltage: 50 – 630 VDC
- Rated voltage: 30 – 220 VAC
- Capacitance range: 0.033 – 15 µF
- Capacitance tolerance: ±5%, ±10%, other tolerances on request
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of -55˚C to +125˚C



Legacy Part Number System

MDC	10	333	K	50	A52	P3	TUBE
Series	Lead Spacing (mm)	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Size Code	Number of Leads per Side	Packaging
Dual In-Line, Metallized Polyester	10 15	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	J = ±5 K = ±10% Other tolerances on request.	50 100 250 400 630	See Dimension Table	P3 = 3 leads P4 = 4 leads P5 = 5 leads P7 = 7 leads P8 = 8 leads	See Ordering Options Table

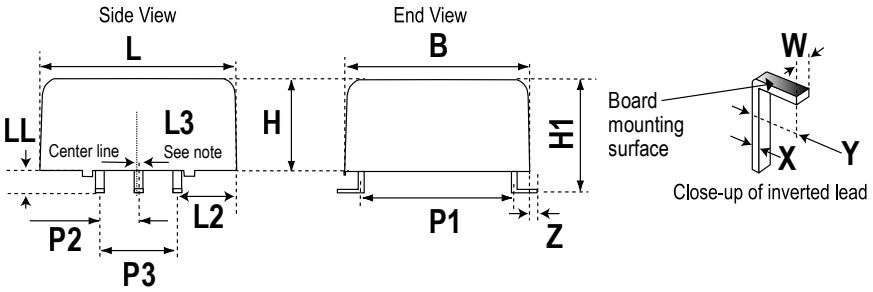
New KEMET Part Number System

F	15	3	A	A	333	K	050	T
Capacitor Class	Series	Number of Leads per Side	Lead Spacing (mm)	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging
F = Film	Dual In-Line, Metallized Polyester	3 = 3 leads 4 = 4 leads 5 = 5 leads 7 = 7 leads 8 = 8 leads	A = 10 B = 15	A = Standard box size	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	J = ±5 K = ±10% Other tolerances on request	050 = 50 100 = 100 250 = 250 400 = 400 630 = 630	See Ordering Options Table

Ordering Options Table

Packaging Type	KEMET Packaging Code	Legacy Packaging Code
Standard Packaging Options		
Bulk (Tube)	T	TUBE
Case Size A53 Tape & Reel (Standard Reel)	VV687	TR32

Dimensions – Millimeters



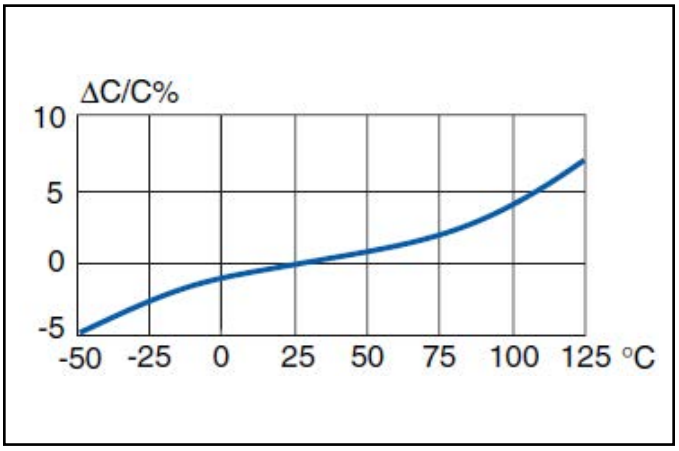
Legacy Size Code	Leads per Side	P1	P2	P3(1)	B	H	L	H1	L2	L3(2)	W	X	Y	Z	LL
		+/-0.2	+/-0.2	+/-0.2	+/-0.2	+/-0.2	+/-0.2	+/-0.4	+/-0.2	Maximum	+/-0.05	+/-0.05	+/-0.2	Nominal	+/-0.2
A52	3	10.0	2.54	5.08	12.2	6.05	11.0	7.75	2.96	0.2	0.5	0.35	1.5	0.25	1.7
A53	3	10.0	2.54	5.08	12.7	9.0	14.0	10.5	4.46	0.2	0.5	0.35	1.5	0	1.5
A54	3	10.0	2.54	5.08	12.2	6.05	13.5	7.75	4.21	0.2	0.5	0.35	1.5	0.25	1.7
A55	3	10.0	2.54	5.08	12.2	6.05	16.5	7.75	5.71	0.2	0.5	0.35	1.5	0.25	1.7
B53	3	15.0	2.54	5.08	16.5	6.05	11.0	7.75	2.96	0.2	0.5	0.35	1.5	0.6	1.7
B55	3	15.0	2.54	5.08	16.5	6.05	12.2	7.75	3.56	0.2	0.5	0.35	1.5	0.6	1.7
A53	4	10.0	2.54	7.62	12.7	9.0	14.0	10.5	3.19	0.2	0.5	0.35	1.5	0	1.5
A54	4	10.0	2.54	7.62	12.2	6.05	13.5	7.75	2.94	0.2	0.5	0.35	1.5	0.25	1.7
A55	4	10.0	2.54	7.62	12.2	6.05	16.5	7.75	4.44	0.2	0.5	0.35	1.5	0.25	1.7
B55	4	15.0	2.54	7.62	16.5	6.05	12.2	7.75	2.29	0.2	0.5	0.35	1.5	0.6	1.7
A55	5	10.0	2.54	10.16	12.2	6.05	16.5	7.75	3.17	0.2	0.5	0.35	1.5	0.25	1.7
A57	7	10.0	2.54	15.24	12.7	9.0	23.0	10.7	3.88	0.2	0.5	0.35	1.5	0	1.7
A58	7	10.0	2.54	15.24	12.7	11.0	23.0	12.5	3.88	0.2	0.5	0.35	1.5	0	1.5
A57	8	10.0	2.54	17.78	12.7	9.0	23.0	10.7	2.61	0.2	0.5	0.35	1.5	0	1.7
A58	8	10.0	2.54	17.78	12.7	11.0	23.0	12.5	2.61	0.2	0.5	0.35	1.5	0	1.5

Drawing shows MDC with three leads per side. Similar dimensional requirements apply to the 4, 5, 7, and 8 leads per side configurations.
(1) P3 represents the cumulative tolerance of all leads.
(2) L3 represents the extent to which the center line of the leads misaligns with the center line of the body. Dimension shown is the maximum such misalignment allowed.

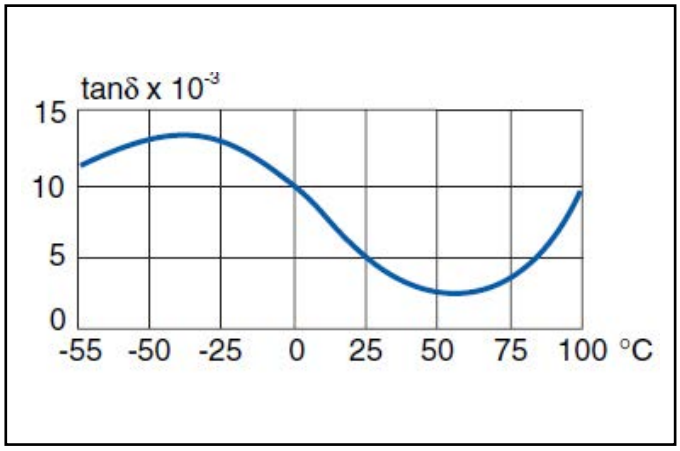
Performance Characteristics

Rated Voltage (VDC)	50	100	250	400	630
Rated Voltage (VAC)	30	63	160	200	220
Capacitance Range (µF)	0.033 – 15	0.033 – 10	0.033 – 1.5	0.033 – 0.47	0.033 – 0.18
Capacitance Tolerance	±5%, ±10%, other tolerances on request				
Category Temperature Range	-55°C to +125°C				
Rated Temperature	+85°C				
Voltage Derating	The rated voltage is decreased with 1.25%/°C from +85°C				
Climatic Category	55/125/56				
Test Voltage	1.6 x V_R, 60 seconds				
Insulation Resistance	Measured at +20°C According to IEC 60384–2				
	Minimum Value Between Terminals				
		C ≤ 0.33 µF		C > 0.33 µF	
	V_R ≤ 100	15,000 MΩ		5,000 MΩ • µF	
	V_R > 100	30,000 MΩ		10,000 MΩ • µF	
Dissipation Factor	Maximum Values at +23°C				
		C ≤ 0.1 µF	0.1 < C < 3.3 µF	3.3 ≤ C ≤ 10 µF	C > 10 µF
	1 kHz	0.8%	0.8%	0.8%	0.8%
	10 kHz	1.5%	1.5%	1.5%	2.0%
	100 kHz	2.5%	5.0%		
Self Inductance	Approximately 4 nH				

Typical Capacitance vs. Temperature at 1 kHz



Typical Dissipation Factor vs. Temperature at 1 kHz



Maximum RMS Voltage V_{rms} (V) vs. Frequency

Value	Rated Voltage	Case Size	1 kHz	10 kHz	100 kHz	500 kHz	1 MHz
1.0 µF	250 V	A57	150.0	36.0	9.2	2.9	1.3
2.2 µF	100 V	A52	50.0	25.0	5.0	1.2	0.6
3.9 µF	100 V	A52	50.0	18.0	4.0	1.0	0.3
4.7 µF	100 V	A54	50.0	16.0	3.5	0.7	0.2
6.8 µF	100 V	A57	50.0	15.5	2.2	0.5	0.2
10 µF	100 V	A58	50.0	15.0	2.0	0.4	0.2

Maximum RMS Current I_{rms} (A) vs. Frequency

Value	Rated Voltage	Case Size	1 kHz	10 kHz	100 kHz	500 kHz	1 MHz
1.0 µF	250 V	A57	1.0	2.2	5.5	9.0	10.0
2.2 µF	100 V	A52	1.5	2.3	6.0	7.5	10.0
3.9 µF	100 V	A52	2.0	4.0	10.0	11.0	11.5
4.7 µF	100 V	A54	2.0	4.5	10.0	12.5	12.5
6.8 µF	100 V	A57	3.0	6.0	11.0	13.0	13.5
10 µF	100 V	A58	4.0	9.0	13.0	14.0	14.5

Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

Table 1 – Ratings & Part Number Reference

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	0.033	AA/A52	12.2	6.05	11.0	10	390	F153AA333(1)050T	MDC10333(1)50A52P3TUBE
50	30	0.039	AA/A52	12.2	6.05	11.0	10	330	F153AA393(1)050T	MDC10393(1)50A52P3TUBE
50	30	0.047	AA/A52	12.2	6.05	11.0	10	270	F153AA473(1)050T	MDC10473(1)50A52P3TUBE
50	30	0.056	AA/A52	12.2	6.05	11.0	10	230	F153AA563(1)050T	MDC10563(1)50A52P3TUBE
50	30	0.068	AA/A52	12.2	6.05	11.0	10	190	F153AA683(1)050T	MDC10683(1)50A52P3TUBE
50	30	0.082	AA/A52	12.2	6.05	11.0	10	160	F153AA823(1)050T	MDC10823(1)50A52P3TUBE
50	30	0.10	AA/A52	12.2	6.05	11.0	10	130	F153AA104(1)050T	MDC10104(1)50A52P3TUBE
50	30	0.12	AA/A52	12.2	6.05	11.0	10	110	F153AA124(1)050T	MDC10124(1)50A52P3TUBE
50	30	0.15	AA/A52	12.2	6.05	11.0	10	85	F153AA154(1)050T	MDC10154(1)50A52P3TUBE
50	30	0.18	AA/A52	12.2	6.05	11.0	10	70	F153AA184(1)050T	MDC10184(1)50A52P3TUBE
50	30	0.22	AA/A52	12.2	6.05	11.0	10	58	F153AA224(1)050T	MDC10224(1)50A52P3TUBE
50	30	0.27	AA/A52	12.2	6.05	11.0	10	47	F153AA274(1)050T	MDC10274(1)50A52P3TUBE
50	30	0.33	AA/A52	12.2	6.05	11.0	10	39	F153AA334(1)050T	MDC10334(1)50A52P3TUBE
50	30	0.39	AA/A52	12.2	6.05	11.0	10	33	F153AA394(1)050T	MDC10394(1)50A52P3TUBE
50	30	0.47	AA/A52	12.2	6.05	11.0	10	30	F153AA474(1)050T	MDC10474(1)50A52P3TUBE
50	30	0.56	AA/A52	12.2	6.05	11.0	10	26	F153AA564(1)050T	MDC10564(1)50A52P3TUBE
50	30	0.68	AA/A52	12.2	6.05	11.0	10	21	F153AA684(1)050T	MDC10684(1)50A52P3TUBE
50	30	0.82	AA/A52	12.2	6.05	11.0	10	18	F153AA824(1)050T	MDC10824(1)50A52P3TUBE
50	30	1.0	AA/A52	12.2	6.05	11.0	10	15	F153AA105(1)050T	MDC10105(1)50A52P3TUBE
50	30	1.2	AA/A52	12.2	6.05	11.0	10	14	F153AA125(1)050T	MDC10125(1)50A52P3TUBE
50	30	1.5	AA/A52	12.2	6.05	11.0	10	13	F153AA155(1)050T	MDC10155(1)50A52P3TUBE
50	30	1.8	AA/A52	12.2	6.05	11.0	10	12	F153AA185(1)050T	MDC10185(1)50A52P3TUBE
50	30	2.2	AA/A52	12.2	6.05	11.0	10	11	F153AA225(1)050T	MDC10225(1)50A52P3TUBE
50	30	2.7	AA/A52	12.2	6.05	11.0	10	10	F153AA275(1)050T	MDC10275(1)50A52P3TUBE
50	30	3.3	AA/A52	12.2	6.05	11.0	10	8	F153AA335(1)050T	MDC10335(1)50A52P3TUBE
50	30	3.9	AA/A52	12.2	6.05	11.0	10	7	F153AA395(1)050T	MDC10395(1)50A52P3TUBE
50	30	4.7	AA/A52	12.2	6.05	11.0	10	6	F153AA475(1)050T	MDC10475(1)50A52P3TUBE
50	30	5.6	AA/A54	12.2	6.05	13.5	10	5	F15(2)AA565(1)050T	MDC10565(1)50A54P(2)TUBE
50	30	6.8	AA/A55	12.2	6.05	16.5	10	5	F15(3)AA685(1)050T	MDC10685(1)50A55P(3)TUBE
50	30	8.2	AA/A57	12.7	9.0	23.0	10	4	F15(4)AA685(1)050T	MDC10825(1)50A57P(4)TUBE
50	30	10	AA/A57	12.7	9.0	23.0	10	3	F15(4)AA106(1)050T	MDC10106(1)50A57P(4)TUBE
50	30	12	AA/A58	12.7	11.0	23.0	10	3	F15(4)AA126(1)050T	MDC10126(1)50A58P(4)TUBE
50	30	15	AA/A58	12.7	11.0	23.0	10	3	F15(4)AA156(1)050T	MDC10156(1)50A58P(4)TUBE
50	30	0.033	BA/B53	16.5	6.05	11.0	15	390	F153BA333(1)050T	MDC15333(1)50B53P3TUBE
50	30	0.039	BA/B53	16.5	6.05	11.0	15	330	F153BA393(1)050T	MDC15393(1)50B53P3TUBE
50	30	0.047	BA/B53	16.5	6.05	11.0	15	270	F153BA473(1)050T	MDC15473(1)50B53P3TUBE
50	30	0.056	BA/B53	16.5	6.05	11.0	15	230	F153BA563(1)050T	MDC15563(1)50B53P3TUBE
50	30	0.068	BA/B53	16.5	6.05	11.0	15	190	F153BA683(1)050T	MDC15683(1)50B53P3TUBE
50	30	0.082	BA/B53	16.5	6.05	11.0	15	160	F153BA823(1)050T	MDC15823(1)50B53P3TUBE
50	30	0.10	BA/B53	16.5	6.05	11.0	15	130	F153BA104(1)050T	MDC15104(1)50B53P3TUBE
50	30	0.12	BA/B53	16.5	6.05	11.0	15	110	F153BA124(1)050T	MDC15124(1)50B53P3TUBE
50	30	0.15	BA/B53	16.5	6.05	11.0	15	85	F153BA154(1)050T	MDC15154(1)50B53P3TUBE
50	30	0.18	BA/B53	16.5	6.05	11.0	15	70	F153BA184(1)050T	MDC15184(1)50B53P3TUBE
50	30	0.22	BA/B53	16.5	6.05	11.0	15	58	F153BA224(1)050T	MDC15224(1)50B53P3TUBE
50	30	0.27	BA/B53	16.5	6.05	11.0	15	47	F153BA274(1)050T	MDC15274(1)50B53P3TUBE
50	30	0.33	BA/B53	16.5	6.05	11.0	15	39	F153BA334(1)050T	MDC15334(1)50B53P3TUBE
50	30	0.39	BA/B53	16.5	6.05	11.0	15	39	F153BA394(1)050T	MDC15394(1)50B53P3TUBE
50	30	0.47	BA/B53	16.5	6.05	11.0	15	30	F153BA474(1)050T	MDC15474(1)50B53P3TUBE
50	30	0.56	BA/B53	16.5	6.05	11.0	15	26	F153BA564(1)050T	MDC15564(1)50B53P3TUBE
50	30	0.68	BA/B53	16.5	6.05	11.0	15	21	F153BA684(1)050T	MDC15684(1)50B53P3TUBE
50	30	0.82	BA/B53	16.5	6.05	11.0	15	18	F153BA824(1)050T	MDC15824(1)50B53P3TUBE
50	30	1.0	BA/B53	16.5	6.05	11.0	15	15	F153BA105(1)050T	MDC15105(1)50B53P3TUBE
50	30	1.2	BA/B53	16.5	6.05	11.0	15	15	F153BA125(1)050T	MDC15125(1)50B53P3TUBE
50	30	1.5	BA/B53	16.5	6.05	11.0	15	13	F153BA155(1)050T	MDC15155(1)50B53P3TUBE
50	30	1.8	BA/B53	16.5	6.05	11.0	15	13	F153BA185(1)050T	MDC15185(1)50B53P3TUBE
50	30	2.2	BA/B53	16.5	6.05	11.0	15	11	F153BA225(1)050T	MDC15225(1)50B53P3TUBE
50	30	2.7	BA/B53	16.5	6.05	11.0	15	11	F153BA275(1)050T	MDC15275(1)50B53P3TUBE
50	30	3.3	BA/B53	16.5	6.05	11.0	15	8	F153BA335(1)050T	MDC15335(1)50B53P3TUBE
50	30	3.9	BA/B53	16.5	6.05	11.0	15	8	F153BA395(1)050T	MDC15395(1)50B53P3TUBE
VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number

(1) J = ± 5%, K = ± 10%, other tolerances on request.
(2) = Number of leads per side, 3 or 4.
(3) = Number of leads per side, 3, 4 or 5.
(4) = Number of leads per side, 7 or 8.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	4.7	BA/B53	16.5	6.05	11.0	15	6	F153BA475(1)050T	MDC15475(1)50B53P3TUBE
50	30	5.6	BA/B53	16.5	6.05	11.0	15	5	F153BA565(1)050T	MDC15565(1)50B53P3TUBE
50	30	6.8	BA/B53	16.5	6.05	11.0	15	5	F153BA685(1)050T	MDC15685(1)50B53P3TUBE
100	63	0.033	AA/A52	12.2	6.05	11.0	10	390	F153AA333(1)100T	MDC10333(1)100A52P3TUBE
100	63	0.039	AA/A52	12.2	6.05	11.0	10	330	F153AA393(1)100T	MDC10393(1)100A52P3TUBE
100	63	0.047	AA/A52	12.2	6.05	11.0	10	270	F153AA473(1)100T	MDC10473(1)100A52P3TUBE
100	63	0.056	AA/A52	12.2	6.05	11.0	10	230	F153AA563(1)100T	MDC10563(1)100A52P3TUBE
100	63	0.068	AA/A52	12.2	6.05	11.0	10	190	F153AA683(1)100T	MDC10683(1)100A52P3TUBE
100	63	0.082	AA/A52	12.2	6.05	11.0	10	160	F153AA823(1)100T	MDC10823(1)100A52P3TUBE
100	63	0.10	AA/A52	12.2	6.05	11.0	10	130	F153AA104(1)100T	MDC10104(1)100A52P3TUBE
100	63	0.12	AA/A52	12.2	6.05	11.0	10	110	F153AA124(1)100T	MDC10124(1)100A52P3TUBE
100	63	0.15	AA/A52	12.2	6.05	11.0	10	85	F153AA154(1)100T	MDC10154(1)100A52P3TUBE
100	63	0.18	AA/A52	12.2	6.05	11.0	10	70	F153AA184(1)100T	MDC10184(1)100A52P3TUBE
100	63	0.22	AA/A52	12.2	6.05	11.0	10	58	F153AA224(1)100T	MDC10224(1)100A52P3TUBE
100	63	0.27	AA/A52	12.2	6.05	11.0	10	47	F153AA274(1)100T	MDC10274(1)100A52P3TUBE
100	63	0.33	AA/A52	12.2	6.05	11.0	10	39	F153AA334(1)100T	MDC10334(1)100A52P3TUBE
100	63	0.39	AA/A52	12.2	6.05	11.0	10	33	F153AA394(1)100T	MDC10394(1)100A52P3TUBE
100	63	0.47	AA/A52	12.2	6.05	11.0	10	30	F153AA474(1)100T	MDC10474(1)100A52P3TUBE
100	63	0.56	AA/A52	12.2	6.05	11.0	10	26	F153AA564(1)100T	MDC10564(1)100A52P3TUBE
100	63	0.68	AA/A52	12.2	6.05	11.0	10	21	F153AA684(1)100T	MDC10684(1)100A52P3TUBE
100	63	0.82	AA/A52	12.2	6.05	11.0	10	18	F153AA824(1)100T	MDC10824(1)100A52P3TUBE
100	63	1.0	AA/A52	12.2	6.05	11.0	10	15	F153AA105(1)100T	MDC10105(1)100A52P3TUBE
100	63	1.2	AA/A52	12.2	6.05	11.0	10	14	F153AA125(1)100T	MDC10125(1)100A52P3TUBE
100	63	1.5	AA/A52	12.2	6.05	11.0	10	13	F153AA155(1)100T	MDC10155(1)100A52P3TUBE
100	63	1.8	AA/A52	12.2	6.05	11.0	10	12	F153AA185(1)100T	MDC10185(1)100A52P3TUBE
100	63	2.2	AA/A52	12.2	6.05	11.0	10	11	F153AA225(1)100T	MDC10225(1)100A52P3TUBE
100	35	2.7	AA/A52	12.2	6.05	11.0	10	10	F153AA275(1)100T	MDC10275(1)100A52P3TUBE
100	35	3.3	AA/A52	12.2	6.05	11.0	10	8	F153AA335(1)100T	MDC10335(1)100A52P3TUBE
100	35	3.9	AA/A52	12.2	6.05	11.0	10	7	F153AA395(1)100T	MDC10395(1)100A52P3TUBE
100	35	4.7	AA/A54	12.2	6.05	13.5	10	6	F15(2)AA475(1)100T	MDC10475(1)100A54P(2)TUBE
100	35	4.7	AA/A53	12.7	9.0	14.0	10	6	F15(2)AA475(1)100VV687	MDC10475(1)100A53P(2)TR32
100	35	5.6	AA/A55	12.2	6.05	16.5	10	5	F15(3)AA565(1)100T	MDC10565(1)100A55P(3)TUBE
100	63	6.8	AA/A57	12.7	9.0	23.0	10	5	F15(4)AA685(1)100T	MDC10685(1)100A57P(4)TUBE
100	63	8.2	AA/A58	12.7	11.0	23.0	10	4	F15(4)AA825(1)100T	MDC10825(1)100A58P(4)TUBE
100	63	10	AA/A58	12.7	11.0	23.0	10	3	F15(4)AA106(1)100T	MDC10106(1)100A58P(4)TUBE
100	63	0.033	BA/B53	16.5	6.05	11.0	15	390	F153BA333(1)100T	MDC15333(1)100B53P3TUBE
100	63	0.039	BA/B53	16.5	6.05	11.0	15	330	F153BA393(1)100T	MDC15393(1)100B53P3TUBE
100	63	0.047	BA/B53	16.5	6.05	11.0	15	270	F153BA473(1)100T	MDC15473(1)100B53P3TUBE
100	63	0.056	BA/B53	16.5	6.05	11.0	15	230	F153BA563(1)100T	MDC15563(1)100B53P3TUBE
100	63	0.068	BA/B53	16.5	6.05	11.0	15	190	F153BA683(1)100T	MDC15683(1)100B53P3TUBE
100	63	0.082	BA/B53	16.5	6.05	11.0	15	160	F153BA823(1)100T	MDC15823(1)100B53P3TUBE
100	63	0.10	BA/B53	16.5	6.05	11.0	15	130	F153BA104(1)100T	MDC15104(1)100B53P3TUBE
100	63	0.12	BA/B53	16.5	6.05	11.0	15	110	F153BA124(1)100T	MDC15124(1)100B53P3TUBE
100	63	0.15	BA/B53	16.5	6.05	11.0	15	85	F153BA154(1)100T	MDC15154(1)100B53P3TUBE
100	63	0.18	BA/B53	16.5	6.05	11.0	15	70	F153BA184(1)100T	MDC15184(1)100B53P3TUBE
100	63	0.22	BA/B53	16.5	6.05	11.0	15	58	F153BA224(1)100T	MDC15224(1)100B53P3TUBE
100	63	0.27	BA/B53	16.5	6.05	11.0	15	47	F153BA274(1)100T	MDC15274(1)100B53P3TUBE
100	63	0.33	BA/B53	16.5	6.05	11.0	15	39	F153BA334(1)100T	MDC15334(1)100B53P3TUBE
100	63	0.39	BA/B53	16.5	6.05	11.0	15	39	F153BA394(1)100T	MDC15394(1)100B53P3TUBE
100	63	0.47	BA/B53	16.5	6.05	11.0	15	30	F153BA474(1)100T	MDC15474(1)100B53P3TUBE
100	63	0.56	BA/B53	16.5	6.05	11.0	15	26	F153BA564(1)100T	MDC15564(1)100B53P3TUBE
100	63	0.68	BA/B53	16.5	6.05	11.0	15	21	F153BA684(1)100T	MDC15684(1)100B53P3TUBE
100	63	0.82	BA/B53	16.5	6.05	11.0	15	18	F153BA824(1)100T	MDC15824(1)100B53P3TUBE
100	63	1.0	BA/B53	16.5	6.05	11.0	15	15	F153BA105(1)100T	MDC15105(1)100B53P3TUBE
100	63	1.2	BA/B53	16.5	6.05	11.0	15	15	F153BA125(1)100T	MDC15125(1)100B53P3TUBE
100	63	1.5	BA/B53	16.5	6.05	11.0	15	13	F153BA155(1)100T	MDC15155(1)100B53P3TUBE
100	63	1.8	BA/B53	16.5	6.05	11.0	15	13	F153BA185(1)100T	MDC15185(1)100B53P3TUBE
100	63	2.2	BA/B53	16.5	6.05	11.0	15	11	F153BA225(1)100T	MDC15225(1)100B53P3TUBE
100	63	2.7	BA/B53	16.5	6.05	11.0	15	11	F153BA275(1)100T	MDC15275(1)100B53P3TUBE
VDC	**VAC**	**Cap Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**ESR 500 kHz (mΩ)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ± 5%, K = ± 10%, other tolerances on request.
(2) = Number of leads per side, 3 or 4.
(3) = Number of leads per side, 3, 4 or 5.
(4) = Number of leads per side, 7 or 8.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
100	63	3.3	BA/B53	16.5	6.05	11.0	15	8	F153BA335(1)100T	MDC15335(1)100B53P3TUBE
100	63	3.9	BA/B53	16.5	6.05	11.0	15	8	F153BA395(1)100T	MDC15395(1)100B53P3TUBE
100	35	4.7	BA/B53	16.5	6.05	11.0	15	6	F153BA475(1)100T	MDC15475(1)100B53P3TUBE
100	63	5.6	BA/B55	16.5	6.05	12.2	15	5	F15(2)BA565(1)100T	MDC15565(1)100B55P(2)TUBE
250	160	0.033	AA/A52	12.2	6.05	11.0	10	390	F153AA333(1)250T	MDC10333(1)250A52P3TUBE
250	160	0.039	AA/A52	12.2	6.05	11.0	10	330	F153AA393(1)250T	MDC10393(1)250A52P3TUBE
250	160	0.047	AA/A52	12.2	6.05	11.0	10	270	F153AA473(1)250T	MDC10473(1)250A52P3TUBE
250	160	0.056	AA/A52	12.2	6.05	11.0	10	230	F153AA563(1)250T	MDC10563(1)250A52P3TUBE
250	160	0.068	AA/A52	12.2	6.05	11.0	10	190	F153AA683(1)250T	MDC10683(1)250A52P3TUBE
250	160	0.082	AA/A52	12.2	6.05	11.0	10	160	F153AA823(1)250T	MDC10823(1)250A52P3TUBE
250	160	0.10	AA/A52	12.2	6.05	11.0	10	130	F153AA104(1)250T	MDC10104(1)250A52P3TUBE
250	160	0.12	AA/A52	12.2	6.05	11.0	10	130	F153AA124(1)250T	MDC10124(1)250A52P3TUBE
250	160	0.15	AA/A52	12.2	6.05	11.0	10	130	F153AA154(1)250T	MDC10154(1)250A52P3TUBE
250	160	0.18	AA/A52	12.2	6.05	11.0	10	70	F153AA184(1)250T	MDC10184(1)250A52P3TUBE
250	160	0.22	AA/A52	12.2	6.05	11.0	10	58	F153AA224(1)250T	MDC10224(1)250A52P3TUBE
250	160	0.27	AA/A52	12.2	6.05	11.0	10	47	F153AA274(1)250T	MDC10274(1)250A52P3TUBE
250	160	0.33	AA/A52	12.2	6.05	11.0	10	39	F153AA334(1)250T	MDC10334(1)250A52P3TUBE
250	160	0.39	AA/A52	12.2	6.05	11.0	10	33	F153AA394(1)250T	MDC10394(1)250A52P3TUBE
250	160	0.47	AA/A52	12.2	6.05	11.0	10	30	F153AA474(1)250T	MDC10474(1)250A52P3TUBE
250	160	0.56	AA/A54	12.2	6.05	13.5	10	26	F15(2)AA564(1)250T	MDC10564(1)250A54P(2)TUBE
250	160	0.68	AA/A55	12.2	6.05	16.5	10	21	F15(3)AA684(1)250T	MDC10684(1)250A55P(3)TUBE
250	160	0.82	AA/A57	12.7	9.0	23.0	10	18	F15(4)AA824(1)250T	MDC10824(1)250A57P(4)TUBE
250	160	1.0	AA/A57	12.7	9.0	23.0	10	15	F15(4)AA105(1)250T	MDC10105(1)250A57P(4)TUBE
250	160	1.2	AA/A58	12.7	11.0	23.0	10	14	F15(4)AA125(1)250T	MDC10125(1)250A58P(4)TUBE
250	160	1.5	AA/A58	12.7	11.0	23.0	10	13	F15(4)AA155(1)250T	MDC10155(1)250A58P(4)TUBE
250	160	0.033	BA/B53	16.5	6.05	11.0	15	390	F153BA333(1)250T	MDC15333(1)250B53P3TUBE
250	160	0.039	BA/B53	16.5	6.05	11.0	15	330	F153BA393(1)250T	MDC15393(1)250B53P3TUBE
250	160	0.047	BA/B53	16.5	6.05	11.0	15	270	F153BA473(1)250T	MDC15473(1)250B53P3TUBE
250	160	0.056	BA/B53	16.5	6.05	11.0	15	230	F153BA563(1)250T	MDC15563(1)250B53P3TUBE
250	160	0.068	BA/B53	16.5	6.05	11.0	15	190	F153BA683(1)250T	MDC15683(1)250B53P3TUBE
250	160	0.082	BA/B53	16.5	6.05	11.0	15	160	F153BA823(1)250T	MDC15823(1)250B53P3TUBE
250	160	0.10	BA/B53	16.5	6.05	11.0	15	130	F153BA104(1)250T	MDC15104(1)250B53P3TUBE
250	160	0.12	BA/B53	16.5	6.05	11.0	15	110	F153BA124(1)250T	MDC15124(1)250B53P3TUBE
250	160	0.15	BA/B53	16.5	6.05	11.0	15	85	F153BA154(1)250T	MDC15154(1)250B53P3TUBE
250	160	0.18	BA/B53	16.5	6.05	11.0	15	70	F153BA184(1)250T	MDC15184(1)250B53P3TUBE
250	160	0.22	BA/B53	16.5	6.05	11.0	15	58	F153BA224(1)250T	MDC15224(1)250B53P3TUBE
250	160	0.27	BA/B53	16.5	6.05	11.0	15	47	F153BA274(1)250T	MDC15274(1)250B53P3TUBE
250	160	0.33	BA/B53	16.5	6.05	11.0	15	39	F153BA334(1)250T	MDC15334(1)250B53P3TUBE
250	160	0.39	BA/B53	16.5	6.05	11.0	15	39	F153BA394(1)250T	MDC15394(1)250B53P3TUBE
250	160	0.47	BA/B53	16.5	6.05	11.0	15	30	F153BA474(1)250T	MDC15474(1)250B53P3TUBE
250	160	0.56	BA/B53	16.5	6.05	11.0	15	26	F153BA564(1)250T	MDC15564(1)250B53P3TUBE
250	160	0.68	BA/B53	16.5	6.05	11.0	15	21	F153BA684(1)250T	MDC15684(1)250B53P3TUBE
400	200	0.033	AA/A52	12.2	6.05	11.0	10	390	F153AA333(1)400T	MDC10333(1)400A52P3TUBE
400	200	0.039	AA/A52	12.2	6.05	11.0	10	330	F153AA393(1)400T	MDC10393(1)400A52P3TUBE
400	200	0.047	AA/A52	12.2	6.05	11.0	10	270	F153AA473(1)400T	MDC10473(1)400A52P3TUBE
400	200	0.056	AA/A52	12.2	6.05	11.0	10	230	F153AA563(1)400T	MDC10563(1)400A52P3TUBE
400	200	0.068	AA/A52	12.2	6.05	11.0	10	190	F153AA683(1)400T	MDC10683(1)400A52P3TUBE
400	200	0.082	AA/A52	12.2	6.05	11.0	10	160	F153AA823(1)400T	MDC10823(1)400A52P3TUBE
400	200	0.10	AA/A52	12.2	6.05	11.0	10	130	F153AA104(1)400T	MDC10104(1)400A52P3TUBE
400	200	0.12	AA/A52	12.2	6.05	11.0	10	110	F153AA124(1)400T	MDC10124(1)400A52P3TUBE
400	200	0.15	AA/A52	12.2	6.05	11.0	10	85	F153AA154(1)400T	MDC10154(1)400A52P3TUBE
400	200	0.18	AA/A52	12.2	6.05	11.0	10	70	F153AA184(1)400T	MDC10184(1)400A52P3TUBE
400	200	0.22	AA/A57	12.7	9.0	23.0	10	58	F15(4)AA224(1)400T	MDC10224(1)400A57P(4)TUBE
400	200	0.27	AA/A57	12.7	9.0	23.0	10	47	F15(4)AA274(1)400T	MDC10274(1)400A57P(4)TUBE
400	200	0.33	AA/A57	12.7	9.0	23.0	10	39	F15(4)AA334(1)400T	MDC10334(1)400A57P(4)TUBE
400	200	0.39	AA/A58	12.7	11.0	23.0	10	33	F15(4)AA394(1)400T	MDC10394(1)400A58P(4)TUBE
400	200	0.47	AA/A58	12.7	11.0	23.0	10	30	F15(4)AA474(1)400T	MDC10474(1)400A58P(4)TUBE
400	200	0.033	BA/B53	16.5	6.05	11.0	15	390	F153BA333(1)400T	MDC15333(1)400B53P3TUBE
400	200	0.039	BA/B53	16.5	6.05	11.0	15	330	F153BA393(1)400T	MDC15393(1)400B53P3TUBE
VDC	**VAC**	**Cap Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**ESR 500 kHz (mΩ)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ± 5%, K = ± 10%, other tolerances on request.
(2) = Number of leads per side, 3 or 4.
(3) = Number of leads per side, 3, 4 or 5.
(4) = Number of leads per side, 7 or 8.

Table 1 – Ratings & Part Number Reference cont'd

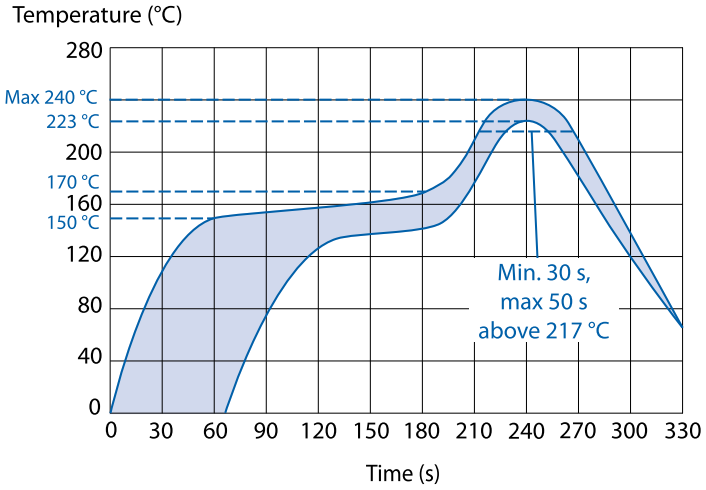
VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
400	200	0.047	BA/B53	16.5	6.05	11.0	15	270	F153BA473(1)400T	MDC15473(1)400B53P3TUBE
400	200	0.056	BA/B53	16.5	6.05	11.0	15	230	F153BA563(1)400T	MDC15563(1)400B53P3TUBE
400	200	0.068	BA/B53	16.5	6.05	11.0	15	190	F153BA683(1)400T	MDC15683(1)400B53P3TUBE
400	200	0.082	BA/B53	16.5	6.05	11.0	15	160	F153BA823(1)400T	MDC15823(1)400B53P3TUBE
400	200	0.10	BA/B53	16.5	6.05	11.0	15	130	F153BA104(1)400T	MDC15104(1)400B53P3TUBE
400	200	0.12	BA/B53	16.5	6.05	11.0	15	110	F153BA124(1)400T	MDC15124(1)400B53P3TUBE
400	200	0.15	BA/B53	16.5	6.05	11.0	15	85	F153BA154(1)400T	MDC15154(1)400B53P3TUBE
400	200	0.18	BA/B53	16.5	6.05	11.0	15	70	F153BA184(1)400T	MDC15184(1)400B53P3TUBE
400	200	0.22	BA/B53	16.5	6.05	11.0	15	58	F153BA224(1)400T	MDC15224(1)400B53P3TUBE
400	200	0.27	BA/B53	16.5	6.05	11.0	15	47	F153BA274(1)400T	MDC15274(1)400B53P3TUBE
400	200	0.33	BA/B55	16.5	6.05	12.2	15	39	F15(2)BA334(1)400T	MDC15334(1)400B55P(2)TUBE
630	220	0.033	AA/A52	12.2	6.05	11.0	10	390	F153AA333(1)630T	MDC10333(1)630A52P3TUBE
630	220	0.039	AA/A52	12.2	6.05	11.0	10	330	F153AA393(1)630T	MDC10393(1)630A52P3TUBE
630	220	0.047	AA/A52	12.2	6.05	11.0	10	270	F153AA473(1)630T	MDC10473(1)630A52P3TUBE
630	220	0.056	AA/A52	12.2	6.05	11.0	10	230	F153AA563(1)630T	MDC10563(1)630A52P3TUBE
630	220	0.068	AA/A54	12.2	6.05	13.5	10	190	F15(2)AA683(1)630T	MDC10683(1)630A54P(2)TUBE
630	220	0.082	AA/A58	12.7	11.0	23.0	10	160	F15(4)AA823(1)630T	MDC10823(1)630A58P(4)TUBE
630	220	0.10	AA/A58	12.7	11.0	23.0	10	130	F15(4)AA104(1)630T	MDC10104(1)630A58P(4)TUBE
630	220	0.12	AA/A58	12.7	11.0	23.0	10	110	F15(4)AA124(1)630T	MDC10124(1)630A58P(4)TUBE
630	220	0.15	AA/A58	12.7	11.0	23.0	10	85	F15(4)AA154(1)630T	MDC10154(1)630A58P(4)TUBE
630	220	0.18	AA/A58	12.7	11.0	23.0	10	70	F15(4)AA184(1)630T	MDC10184(1)630A58P(4)TUBE
630	220	0.033	BA/B53	16.5	6.05	11.0	15	390	F153BA333(1)630T	MDC15333(1)630B53P3TUBE
630	220	0.039	BA/B53	16.5	6.05	11.0	15	330	F153BA393(1)630T	MDC15393(1)630B53P3TUBE
630	220	0.047	BA/B53	16.5	6.05	11.0	15	270	F153BA473(1)630T	MDC15473(1)630B53P3TUBE
630	220	0.056	BA/B53	16.5	6.05	11.0	15	230	F153BA563(1)630T	MDC15563(1)630B53P3TUBE
630	220	0.068	BA/B53	16.5	6.05	11.0	15	190	F153BA683(1)630T	MDC15683(1)630B53P3TUBE
630	220	0.082	BA/B53	16.5	6.05	11.0	15	160	F153BA823(1)630T	MDC15823(1)630B53P3TUBE
630	220	0.10	BA/B53	16.5	6.05	11.0	15	130	F153BA104(1)630T	MDC15104(1)630B53P3TUBE
VDC	**VAC**	**Cap Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**ESR 500 kHz (mΩ)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ± 5%, K = ± 10%, other tolerances on request.
(2) = Number of leads per side, 3 or 4.
(3) = Number of leads per side, 3, 4 or 5.
(4) = Number of leads per side, 7 or 8.

Soldering Process

Reflow soldering temperature is measured on the top surface of the component: Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 240°C.

A lead-free soldering process for this series is in development. Please contact KEMET for details.



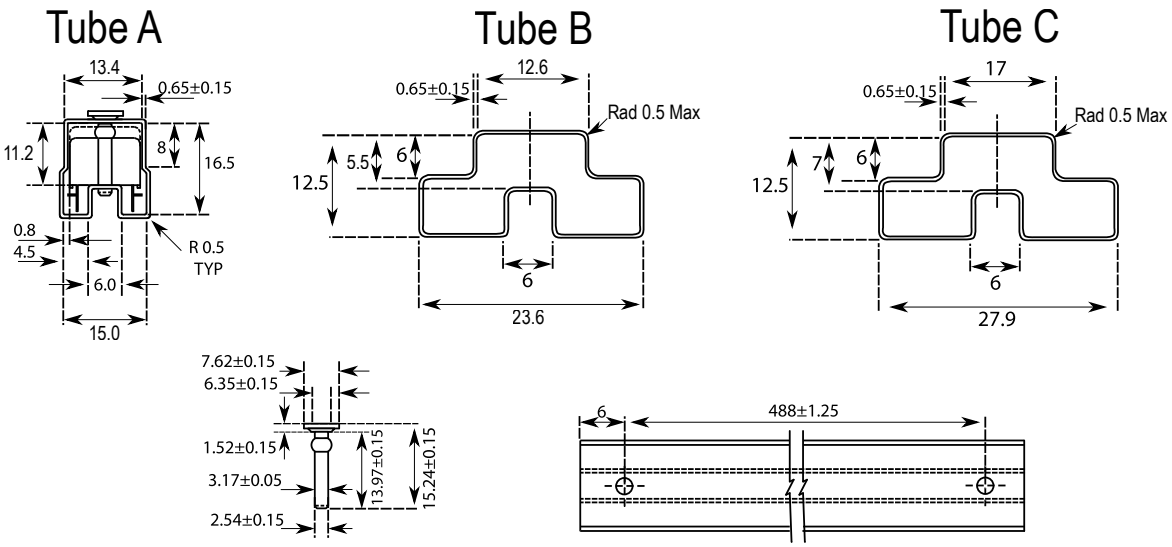
Marking

- KEMET
- Capacitance
- Capacitance tolerance code
- Rated voltage
- Capacitor family code MDC

Packaging Quantities

Size Code	Lead Spacing	Base (mm)	Height (mm)	Length (mm)	Bulk	Reel
A52	10.0	12.2	6.05	11.0	43	
A53		12.7	9.0	14.0	34	200
A54		12.2	6.05	13.5	35	
A55		12.2	6.05	16.5	28	
A57		12.7	9.0	23.0	21	
A58		12.7	11.0	23.0	21	
B53	15.0	16.5	6.05	11.0	43	
B55		16.5	6.05	12.2	39	

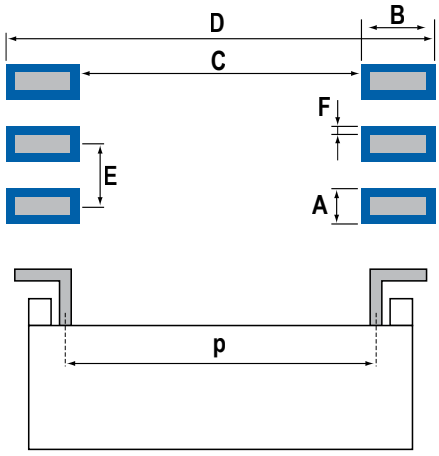
Tube Packaging



Size Code	Dimensions in mm	Tube
A52	10.0 – 12.2 x 6.05 x 11.0	Tube B
A53	10.0 – 12.7 x 9.0 x 14.0	Tube A
A54	10.0 – 12.2 x 6.05 x 13.5	Tube B
A55	10.0 – 12.2 x 6.05 x 16.5	Tube B
A57	10.0 – 12.7 x 9.0 x 23.0	Tube A
A58	10.0 – 12.7 x 11.0 x 23.0	Tube A
B53	15.0 – 16.5 x 6.05 x 11.0	Tube C
B55	15.0 – 16.5 x 6.05 x 12.2	Tube C

Landing

Size	Dimensions in mm						
	p	A	B	C	D	E	F
A52	10	1	2	9.15	13.15	2.54	0.25
A53	10	1	2	9.15	13.15	2.54	0.25
A54	10	1	2	9.15	13.15	2.54	0.25
A55	10	1	2	9.15	13.15	2.54	0.25
A57	10	1	2	9.15	13.15	2.54	0.25
A58	10	1	2	9.15	13.15	2.54	0.25
B53	15	1	2	14.15	18.15	2.54	0.25
B55	15	1	2	14.15	18.15	2.54	0.25



MDS Series Dual In-Line Low Profile, 50 – 630 VDC, High Current

Overview

Dual in-line (DIL) metallized polyester (PET) film capacitor. Encapsulation in self-extinguishing material meeting the requirements of UL 94 V–0.

Applications

Typical applications include high frequency switched-mode power supplies, DC/DC converters and input/output filtering.

Benefits

- Rated voltage: 50 – 630 VDC
- Rated voltage: 30 – 220 VAC
- Capacitance range: 0.033 – 6.8 µF
- Capacitance tolerance: ±5%, ±10%, other tolerances on request
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of -55˚C to +125˚C

Legacy Part Number System

MDS	10	333	K	50	A52	P3	TUBE
Series	Lead Spacing (mm)	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Size Code	Number of Leads per Side	Packaging
Dual In-Line, Metallized Polyester	10 15	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	J = ±5 K = ±10% Other tolerances on request.	050 = 50 100 = 100 250 = 250 400 = 400 630 = 630	See Dimension Table	P3 = 3 leads P4 = 4 leads P5 = 5 leads	See Ordering Options Table

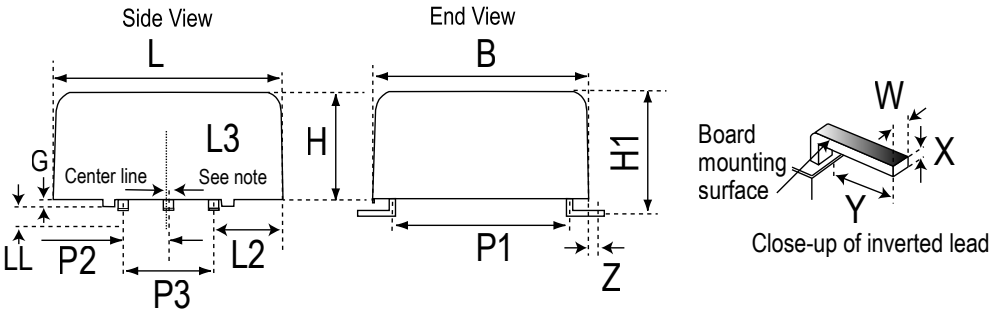
New KEMET Part Number System

F	17	3	A	A	333	K	050	T
Capacitor Class	Series	Number of Leads per Side	Lead Spacing (mm)	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging
F = Film	Dual In-Line, Metallized Polyester	3 = 3 leads 4 = 4 leads 5 = 5 leads	A = 10 B = 15	A = Standard box size	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	J = ±5 K = ±10% Other tolerances on request	050 = 50 100 = 100 250 = 250 400 = 400 630 = 630	See Ordering Options Table

Ordering Options Table

Packaging Type	KEMET Packaging Code	Legacy Packaging Code
Standard Packaging Options		
Bulk (Tube)	T	TUBE
Case Size A53 Tape & Reel (Standard Reel)	VV687	TR32

Dimensions – Millimeters



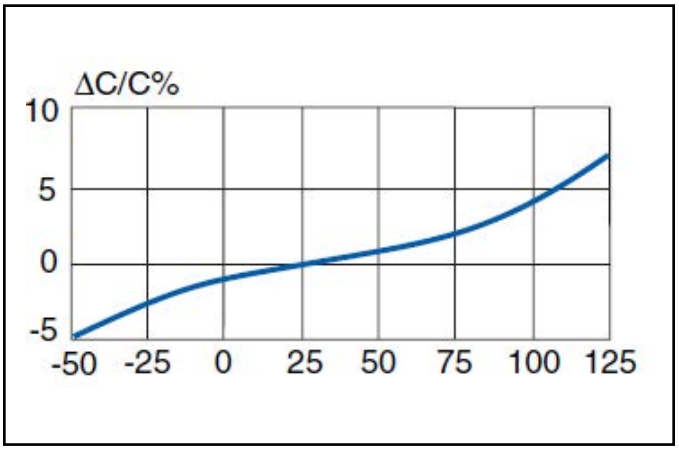
Legacy Size Code	Leads per Side	P1	P2	P3(1)	B	H	L	H1	L2	L3(2)	W	X	Y	Z	LL
		+/-0.2	+/-0.2	+/-0.2	+/-0.2	+/-0.2	+/-0.2	+/-0.4	+/-0.2	Maximum	+/-0.05	+/-0.05	+/-0.2	Nominal	+/-0.2
A52	3	10.0	2.54	5.08	12.2	6.05	11.0	7.75	2.96	0.2	0.5	0.35	1.5	0.25	1.7
A53	3	10.0	2.54	5.08	12.7	9.0	14.0	10.5	4.46	0.2	0.5	0.35	1.5	0	1.5
A54	3	10.0	2.54	5.08	12.2	6.05	13.5	7.75	4.21	0.2	0.5	0.35	1.5	0.25	1.7
A55	3	10.0	2.54	5.08	12.2	6.05	16.5	7.75	5.71	0.2	0.5	0.35	1.5	0.25	1.7
B53	3	15.0	2.54	5.08	16.5	6.05	11.0	7.75	2.96	0.2	0.5	0.35	1.5	0.6	1.7
B55	3	15.0	2.54	5.08	16.5	6.05	12.2	7.75	3.56	0.2	0.5	0.35	1.5	0.6	1.7
A53	4	10.0	2.54	7.62	12.7	9.0	14.0	10.5	3.19	0.2	0.5	0.35	1.5	0	1.5
A54	4	10.0	2.54	7.62	12.2	6.05	13.5	7.75	2.94	0.2	0.5	0.35	1.5	0.25	1.7
A55	4	10.0	2.54	7.62	12.2	6.05	16.5	7.75	4.44	0.2	0.5	0.35	1.5	0.25	1.7
B55	4	15.0	2.54	7.62	16.5	6.05	12.2	7.75	2.29	0.2	0.5	0.35	1.5	0.6	1.7
A55	5	10.0	2.54	10.16	12.2	6.05	16.5	7.75	3.17	0.2	0.5	0.35	1.5	0.25	1.7

Drawing shows MDS with three leads per side. Similar dimensional requirements apply to the 4, 5, 7, and 8 leads per side configurations.
(1) P3 represents the cumulative tolerance of all leads.
(2) L3 represents the extent to which the center line of the leads misaligns with the center line of the body. Dimension shown is the maximum such misalignment allowed.

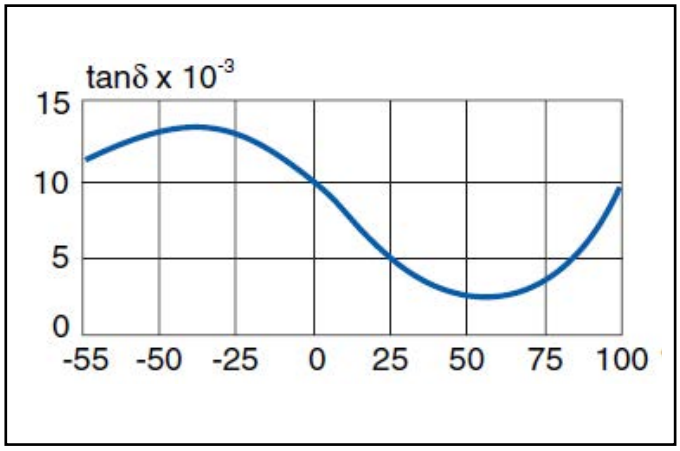
Performance Characteristics

Rated Voltage (VDC)	50	100	250	400	630
Rated Voltage (VAC)	30	63	160	200	220
Capacitance Range (µF)	0.033 – 15	0.033 – 10	0.033 – 1.5	0.033 – 0.47	0.033 – 0.18
Capacitance Tolerance	±5%, ±10%, other tolerances on request				
Category Temperature Range	-55°C to +125°C				
Rated Temperature	+85°C				
Voltage Derating	The rated voltage is decreased with 1.25%/°C from +85°C				
Climatic Category	55/125/56				
Test Voltage	1.6 x V_R, 60 seconds				
Insulation Resistance	Measured at +20°C According to IEC 60384–2				
	Minimum Value Between Terminals				
		C ≤ 0.33 µF		C > 0.33 µF	
	V_R ≤ 100	15,000 MΩ		5,000 MΩ • µF	
	V_R > 100	30,000 MΩ		10,000 MΩ • µF	
Dissipation Factor	Maximum Values at +23°C				
		C ≤ 0.1 µF	0.1 < C < 3.3 µF	3.3 ≤ C ≤ 6.8 µF	
	1 kHz	0.8%	0.8%	0.8%	
	10 kHz	1.5%	1.5%	1.5%	
	100 kHz	2.5%	5.0%		
Self Inductance	Approximately 4 nH				

Typical Capacitance vs. Temperature at 1 kHz



Typical Dissipation Factor vs. Temperature at 1 kHz



Maximum RMS Voltage V_{rms} (V) vs. Frequency

Value	Rated Voltage	Case Size	1 kHz	10 kHz	100 kHz	500 kHz	1 MHz
1.0 µF	250 V	A57	150.0	36.0	9.2	2.9	1.3
2.2 µF	100 V	A52	50.0	25.0	5.0	1.2	0.6
3.9 µF	100 V	A52	50.0	18.0	4.0	1.0	0.3
4.7 µF	100 V	A54	50.0	16.0	3.5	0.7	0.2
6.8 µF	100 V	A57	50.0	15.5	2.2	0.5	0.2

Maximum RMS Current I_{rms} (A) vs. Frequency

Value	Rated Voltage	Case Size	1 kHz	10 kHz	100 kHz	500 kHz	1 MHz
1.0 µF	250 V	A57	1.0	2.2	5.5	9.0	10.0
2.2 µF	100 V	A52	1.5	2.3	6.0	7.5	10.0
3.9 µF	100 V	A52	2.0	4.0	10.0	11.0	11.5
4.7 µF	100 V	A54	2.0	4.5	10.0	12.5	12.5
6.8 µF	100 V	A57	3.0	6.0	11.0	13.0	13.5

Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

Table 1 – Ratings & Part Number Reference

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	0.033	AA/50A	12.2	6.05	11.0	10	390	F173AA333(1)050T	MDS10333(1)50A52P3TUBE
50	30	0.039	AA/50A	12.2	6.05	11.0	10	330	F173AA393(1)050T	MDS10393(1)50A52P3TUBE
50	30	0.047	AA/50A	12.2	6.05	11.0	10	270	F173AA473(1)050T	MDS10473(1)50A52P3TUBE
50	30	0.056	AA/50A	12.2	6.05	11.0	10	230	F173AA563(1)050T	MDS10563(1)50A52P3TUBE
50	30	0.068	AA/50A	12.2	6.05	11.0	10	190	F173AA683(1)050T	MDS10683(1)50A52P3TUBE
50	30	0.082	AA/50A	12.2	6.05	11.0	10	160	F173AA823(1)050T	MDS10823(1)50A52P3TUBE
50	30	0.10	AA/50A	12.2	6.05	11.0	10	130	F173AA104(1)050T	MDS10104(1)50A52P3TUBE
50	30	0.12	AA/50A	12.2	6.05	11.0	10	110	F173AA124(1)050T	MDS10124(1)50A52P3TUBE
50	30	0.15	AA/50A	12.2	6.05	11.0	10	85	F173AA154(1)050T	MDS10154(1)50A52P3TUBE
50	30	0.18	AA/50A	12.2	6.05	11.0	10	70	F173AA184(1)050T	MDS10184(1)50A52P3TUBE
50	30	0.22	AA/50A	12.2	6.05	11.0	10	58	F173AA224(1)050T	MDS10224(1)50A52P3TUBE
50	30	0.27	AA/50A	12.2	6.05	11.0	10	47	F173AA274(1)050T	MDS10274(1)50A52P3TUBE
50	30	0.33	AA/50A	12.2	6.05	11.0	10	39	F173AA334(1)050T	MDS10334(1)50A52P3TUBE
50	30	0.39	AA/50A	12.2	6.05	11.0	10	33	F173AA394(1)050T	MDS10394(1)50A52P3TUBE
50	30	0.47	AA/50A	12.2	6.05	11.0	10	30	F173AA474(1)050T	MDS10474(1)50A52P3TUBE
50	30	0.56	AA/50A	12.2	6.05	11.0	10	26	F173AA564(1)050T	MDS10564(1)50A52P3TUBE
50	30	0.68	AA/50A	12.2	6.05	11.0	10	21	F173AA684(1)050T	MDS10684(1)50A52P3TUBE
50	30	0.82	AA/50A	12.2	6.05	11.0	10	18	F173AA824(1)050T	MDS10824(1)50A52P3TUBE
50	30	1.0	AA/50A	12.2	6.05	11.0	10	15	F173AA105(1)050T	MDS10105(1)50A52P3TUBE
50	30	1.2	AA/50A	12.2	6.05	11.0	10	14	F173AA125(1)050T	MDS10125(1)50A52P3TUBE
50	30	1.5	AA/50A	12.2	6.05	11.0	10	13	F173AA155(1)050T	MDS10155(1)50A52P3TUBE
50	30	1.8	AA/50A	12.2	6.05	11.0	10	12	F173AA185(1)050T	MDS10185(1)50A52P3TUBE
50	30	2.2	AA/50A	12.2	6.05	11.0	10	11	F173AA225(1)050T	MDS10225(1)50A52P3TUBE
50	30	2.7	AA/50A	12.2	6.05	11.0	10	10	F173AA275(1)050T	MDS10275(1)50A52P3TUBE
50	30	3.3	AA/50A	12.2	6.05	11.0	10	8	F173AA335(1)050T	MDS10335(1)50A52P3TUBE
50	30	3.9	AA/50A	12.2	6.05	11.0	10	7	F173AA395(1)050T	MDS10395(1)50A52P3TUBE
50	30	4.7	AA/50A	12.2	6.05	11.0	10	6	F173AA475(1)050T	MDS10475(1)50A52P3TUBE
50	30	5.6	AA/50A	12.2	6.05	13.5	10	5	F17(2)AA565(1)050T	MDS10565(1)50A54P(2)TUBE
50	30	6.8	AA/50A	12.2	6.05	16.5	10	5	F17(3)AA685(1)050T	MDS10685(1)50A55P(3)TUBE
50	30	0.033	BA/50B	16.5	6.05	11.0	15	390	F173BA333(1)050T	MDS15333(1)50B53P3TUBE
50	30	0.039	BA/50B	16.5	6.05	11.0	15	330	F173BA393(1)050T	MDS15393(1)50B53P3TUBE
50	30	0.047	BA/50B	16.5	6.05	11.0	15	270	F173BA473(1)050T	MDS15473(1)50B53P3TUBE
50	30	0.056	BA/50B	16.5	6.05	11.0	15	230	F173BA563(1)050T	MDS15563(1)50B53P3TUBE
50	30	0.068	BA/50B	16.5	6.05	11.0	15	190	F173BA683(1)050T	MDS15683(1)50B53P3TUBE
50	30	0.082	BA/50B	16.5	6.05	11.0	15	160	F173BA823(1)050T	MDS15823(1)50B53P3TUBE
50	30	0.10	BA/50B	16.5	6.05	11.0	15	130	F173BA104(1)050T	MDS15104(1)50B53P3TUBE
50	30	0.12	BA/50B	16.5	6.05	11.0	15	110	F173BA124(1)050T	MDS15124(1)50B53P3TUBE
50	30	0.15	BA/50B	16.5	6.05	11.0	15	85	F173BA154(1)050T	MDS15154(1)50B53P3TUBE
50	30	0.18	BA/50B	16.5	6.05	11.0	15	70	F173BA184(1)050T	MDS15184(1)50B53P3TUBE
50	30	0.22	BA/50B	16.5	6.05	11.0	15	58	F173BA224(1)050T	MDS15224(1)50B53P3TUBE
50	30	0.27	BA/50B	16.5	6.05	11.0	15	47	F173BA274(1)050T	MDS15274(1)50B53P3TUBE
50	30	0.33	BA/50B	16.5	6.05	11.0	15	39	F173BA334(1)050T	MDS15334(1)50B53P3TUBE
50	30	0.39	BA/50B	16.5	6.05	11.0	15	39	F173BA394(1)050T	MDS15394(1)50B53P3TUBE
50	30	0.47	BA/50B	16.5	6.05	11.0	15	30	F173BA474(1)050T	MDS15474(1)50B53P3TUBE
50	30	0.56	BA/50B	16.5	6.05	11.0	15	26	F173BA564(1)050T	MDS15564(1)50B53P3TUBE
50	30	0.68	BA/50B	16.5	6.05	11.0	15	21	F173BA684(1)050T	MDS15684(1)50B53P3TUBE
50	30	0.82	BA/50B	16.5	6.05	11.0	15	18	F173BA824(1)050T	MDS15824(1)50B53P3TUBE
50	30	1.0	BA/50B	16.5	6.05	11.0	15	15	F173BA105(1)050T	MDS15105(1)50B53P3TUBE
50	30	1.2	BA/50B	16.5	6.05	11.0	15	13	F173BA125(1)050T	MDS15125(1)50B53P3TUBE
50	30	1.5	BA/50B	16.5	6.05	11.0	15	13	F173BA155(1)050T	MDS15155(1)50B53P3TUBE
50	30	1.8	BA/50B	16.5	6.05	11.0	15	13	F173BA185(1)050T	MDS15185(1)50B53P3TUBE
50	30	2.2	BA/50B	16.5	6.05	11.0	15	11	F173BA225(1)050T	MDS15225(1)50B53P3TUBE
50	30	2.7	BA/50B	16.5	6.05	11.0	15	13	F173BA275(1)050T	MDS15275(1)50B53P3TUBE
50	30	3.3	BA/50B	16.5	6.05	11.0	15	8	F173BA335(1)050T	MDS15335(1)50B53P3TUBE
50	30	3.9	BA/50B	16.5	6.05	11.0	15	13	F173BA395(1)050T	MDS15395(1)50B53P3TUBE
50	30	4.7	BA/50B	16.5	6.05	11.0	15	6	F173BA475(1)050T	MDS15475(1)50B53P3TUBE
50	30	5.6	BA/50B	16.5	6.05	11.0	15	5	F173BA565(1)050T	MDS15565(1)50B53P3TUBE
50	30	6.8	BA/50B	16.5	6.05	11.0	15	5	F173BA685(1)050T	MDS15685(1)50B53P3TUBE
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**ESR 500 kHz (mΩ)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.
(2) = Number of leads per side, 3 or 4.
(3) = Number of leads per side, 3, 4 or 5.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
100	63	0.033	AA/00A	12.2	6.05	11.0	10	390	F173AA333(1)100T	MDS10333(1)100A52P3TUBE
100	63	0.039	AA/00A	12.2	6.05	11.0	10	330	F173AA393(1)100T	MDS10393(1)100A52P3TUBE
100	63	0.047	AA/00A	12.2	6.05	11.0	10	270	F173AA473(1)100T	MDS10473(1)100A52P3TUBE
100	63	0.056	AA/00A	12.2	6.05	11.0	10	230	F173AA563(1)100T	MDS10563(1)100A52P3TUBE
100	63	0.068	AA/00A	12.2	6.05	11.0	10	190	F173AA683(1)100T	MDS10683(1)100A52P3TUBE
100	63	0.082	AA/00A	12.2	6.05	11.0	10	160	F173AA823(1)100T	MDS10823(1)100A52P3TUBE
100	63	0.10	AA/00A	12.2	6.05	11.0	10	130	F173AA104(1)100T	MDS10104(1)100A52P3TUBE
100	63	0.12	AA/00A	12.2	6.05	11.0	10	110	F173AA124(1)100T	MDS10124(1)100A52P3TUBE
100	63	0.15	AA/00A	12.2	6.05	11.0	10	85	F173AA154(1)100T	MDS10154(1)100A52P3TUBE
100	63	0.18	AA/00A	12.2	6.05	11.0	10	70	F173AA184(1)100T	MDS10184(1)100A52P3TUBE
100	63	0.22	AA/00A	12.2	6.05	11.0	10	58	F173AA224(1)100T	MDS10224(1)100A52P3TUBE
100	63	0.27	AA/00A	12.2	6.05	11.0	10	47	F173AA274(1)100T	MDS10274(1)100A52P3TUBE
100	63	0.33	AA/00A	12.2	6.05	11.0	10	39	F173AA334(1)100T	MDS10334(1)100A52P3TUBE
100	63	0.39	AA/00A	12.2	6.05	11.0	10	33	F173AA394(1)100T	MDS10394(1)100A52P3TUBE
100	63	0.47	AA/00A	12.2	6.05	11.0	10	30	F173AA474(1)100T	MDS10474(1)100A52P3TUBE
100	63	0.56	AA/00A	12.2	6.05	11.0	10	26	F173AA564(1)100T	MDS10564(1)100A52P3TUBE
100	63	0.68	AA/00A	12.2	6.05	11.0	10	21	F173AA684(1)100T	MDS10684(1)100A52P3TUBE
100	63	0.82	AA/00A	12.2	6.05	11.0	10	18	F173AA824(1)100T	MDS10824(1)100A52P3TUBE
100	63	1.0	AA/00A	12.2	6.05	11.0	10	15	F173AA105(1)100T	MDS10105(1)100A52P3TUBE
100	63	1.2	AA/00A	12.2	6.05	11.0	10	14	F173AA125(1)100T	MDS10125(1)100A52P3TUBE
100	63	1.5	AA/00A	12.2	6.05	11.0	10	13	F173AA155(1)100T	MDS10155(1)100A52P3TUBE
100	63	1.8	AA/00A	12.2	6.05	11.0	10	12	F173AA185(1)100T	MDS10185(1)100A52P3TUBE
100	63	2.2	AA/00A	12.2	6.05	11.0	10	11	F173AA225(1)100T	MDS10225(1)100A52P3TUBE
100	35	2.7	AA/00A	12.2	6.05	11.0	10	10	F173AA275(1)100T	MDS10275(1)100A52P3TUBE
100	35	3.3	AA/00A	12.2	6.05	11.0	10	8	F173AA335(1)100T	MDS10335(1)100A52P3TUBE
100	35	3.9	AA/00A	12.2	6.05	11.0	10	7	F173AA395(1)100T	MDS10395(1)100A52P3TUBE
100	35	4.7	AA/00A	12.2	6.05	13.5	10	6	F17(2)AA475(1)100T	MDS10475(1)100A54P(2)TUBE
100	35	5.6	AA/00A	12.2	6.05	16.5	10	5	F17(3)AA565(1)100T	MDS10565(1)100A55P(3)TUBE
100	63	0.033	BA/00B	16.5	6.05	11.0	15	390	F173BA333(1)100T	MDS15333(1)100B53P3TUBE
100	63	0.039	BA/00B	16.5	6.05	11.0	15	330	F173BA393(1)100T	MDS15393(1)100B53P3TUBE
100	63	0.047	BA/00B	16.5	6.05	11.0	15	270	F173BA473(1)100T	MDS15473(1)100B53P3TUBE
100	63	0.056	BA/00B	16.5	6.05	11.0	15	230	F173BA563(1)100T	MDS15563(1)100B53P3TUBE
100	63	0.068	BA/00B	16.5	6.05	11.0	15	190	F173BA683(1)100T	MDS15683(1)100B53P3TUBE
100	63	0.082	BA/00B	16.5	6.05	11.0	15	160	F173BA823(1)100T	MDS15823(1)100B53P3TUBE
100	63	0.10	BA/00B	16.5	6.05	11.0	15	130	F173BA104(1)100T	MDS15104(1)100B53P3TUBE
100	63	0.12	BA/00B	16.5	6.05	11.0	15	110	F173BA124(1)100T	MDS15124(1)100B53P3TUBE
100	63	0.15	BA/00B	16.5	6.05	11.0	15	85	F173BA154(1)100T	MDS15154(1)100B53P3TUBE
100	63	0.18	BA/00B	16.5	6.05	11.0	15	70	F173BA184(1)100T	MDS15184(1)100B53P3TUBE
100	63	0.22	BA/00B	16.5	6.05	11.0	15	58	F173BA224(1)100T	MDS15224(1)100B53P3TUBE
100	63	0.27	BA/00B	16.5	6.05	11.0	15	47	F173BA274(1)100T	MDS15274(1)100B53P3TUBE
100	63	0.33	BA/00B	16.5	6.05	11.0	15	39	F173BA334(1)100T	MDS15334(1)100B53P3TUBE
100	63	0.39	BA/00B	16.5	6.05	11.0	15	39	F173BA394(1)100T	MDS15394(1)100B53P3TUBE
100	63	0.47	BA/00B	16.5	6.05	11.0	15	30	F173BA474(1)100T	MDS15474(1)100B53P3TUBE
100	63	0.56	BA/00B	16.5	6.05	11.0	15	26	F173BA564(1)100T	MDS15564(1)100B53P3TUBE
100	63	0.68	BA/00B	16.5	6.05	11.0	15	21	F173BA684(1)100T	MDS15684(1)100B53P3TUBE
100	63	0.82	BA/00B	16.5	6.05	11.0	15	18	F173BA824(1)100T	MDS15824(1)100B53P3TUBE
100	63	1.0	BA/00B	16.5	6.05	11.0	15	15	F173BA105(1)100T	MDS15105(1)100B53P3TUBE
100	63	1.2	BA/00B	16.5	6.05	11.0	15	15	F173BA125(1)100T	MDS15125(1)100B53P3TUBE
100	63	1.5	BA/00B	16.5	6.05	11.0	15	13	F173BA155(1)100T	MDS15155(1)100B53P3TUBE
100	63	1.8	BA/00B	16.5	6.05	11.0	15	13	F173BA185(1)100T	MDS15185(1)100B53P3TUBE
100	63	2.2	BA/00B	16.5	6.05	11.0	15	11	F173BA225(1)100T	MDS15225(1)100B53P3TUBE
100	63	2.7	BA/00B	16.5	6.05	11.0	15	11	F173BA275(1)100T	MDS15275(1)100B53P3TUBE
100	63	3.3	BA/00B	16.5	6.05	11.0	15	8	F173BA335(1)100T	MDS15335(1)100B53P3TUBE
100	35	3.9	BA/00B	16.5	6.05	11.0	15	8	F173BA395(1)100T	MDS15395(1)100B53P3TUBE
100	35	4.7	BA/00B	16.5	6.05	11.0	15	6	F173BA475(1)100T	MDS15475(1)100B53P3TUBE
100	35	5.6	BA/00B	16.5	6.05	12.2	15	5	F17(2)BA565(1)100T	MDS15565(1)100B55P(2)TUBE
250	160	0.033	AA/50A	12.2	6.05	11.0	10	390	F173AA333(1)250T	MDS10333(1)250A52P3TUBE
250	160	0.039	AA/50A	12.2	6.05	11.0	10	330	F173AA393(1)250T	MDS10393(1)250A52P3TUBE
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**ESR 500 kHz (mΩ)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.

(2) = Number of leads per side, 3 or 4.

(3) = Number of leads per side, 3, 4 or 5.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
250	160	0.047	AA/50A	12.2	6.05	11.0	10	270	F173AA473(1)250T	MDS10473(1)250A52P3TUBE
250	160	0.056	AA/50A	12.2	6.05	11.0	10	230	F173AA563(1)250T	MDS10563(1)250A52P3TUBE
250	160	0.068	AA/50A	12.2	6.05	11.0	10	190	F173AA683(1)250T	MDS10683(1)250A52P3TUBE
250	160	0.082	AA/50A	12.2	6.05	11.0	10	160	F173AA823(1)250T	MDS10823(1)250A52P3TUBE
250	160	0.10	AA/50A	12.2	6.05	11.0	10	130	F173AA104(1)250T	MDS10104(1)250A52P3TUBE
250	160	0.12	AA/50A	12.2	6.05	11.0	10	110	F173AA124(1)250T	MDS10124(1)250A52P3TUBE
250	160	0.15	AA/50A	12.2	6.05	11.0	10	85	F173AA154(1)250T	MDS10154(1)250A52P3TUBE
250	160	0.18	AA/50A	12.2	6.05	11.0	10	70	F173AA184(1)250T	MDS10184(1)250A52P3TUBE
250	160	0.22	AA/50A	12.2	6.05	11.0	10	58	F173AA224(1)250T	MDS10224(1)250A52P3TUBE
250	160	0.27	AA/50A	12.2	6.05	11.0	10	47	F173AA274(1)250T	MDS10274(1)250A52P3TUBE
250	160	0.33	AA/50A	12.2	6.05	11.0	10	39	F173AA334(1)250T	MDS10334(1)250A52P3TUBE
250	160	0.39	AA/50A	12.2	6.05	11.0	10	33	F173AA394(1)250T	MDS10394(1)250A52P3TUBE
250	160	0.47	AA/50A	12.2	6.05	11.0	10	30	F173AA474(1)250T	MDS10474(1)250A52P3TUBE
250	160	0.56	AA/50A	12.2	6.05	13.5	10	26	F17(2)AA564(1)250T	MDS10564(1)250A54P(2)TUBE
250	160	0.68	AA/50A	12.2	6.05	16.5	10	21	F17(3)AA684(1)250T	MDS10684(1)250A55P(3)TUBE
250	160	0.033	BA/50B	16.5	6.05	11.0	15	390	F173BA333(1)250T	MDS15333(1)250B53P3TUBE
250	160	0.039	BA/50B	16.5	6.05	11.0	15	330	F173BA393(1)250T	MDS15393(1)250B53P3TUBE
250	160	0.047	BA/50B	16.5	6.05	11.0	15	270	F173BA473(1)250T	MDS15473(1)250B53P3TUBE
250	160	0.056	BA/50B	16.5	6.05	11.0	15	230	F173BA563(1)250T	MDS15563(1)250B53P3TUBE
250	160	0.068	BA/50B	16.5	6.05	11.0	15	190	F173BA683(1)250T	MDS15683(1)250B53P3TUBE
250	160	0.082	BA/50B	16.5	6.05	11.0	15	160	F173BA823(1)250T	MDS15823(1)250B53P3TUBE
250	160	0.10	BA/50B	16.5	6.05	11.0	15	130	F173BA104(1)250T	MDS15104(1)250B53P3TUBE
250	160	0.12	BA/50B	16.5	6.05	11.0	15	110	F173BA124(1)250T	MDS15124(1)250B53P3TUBE
250	160	0.15	BA/50B	16.5	6.05	11.0	15	85	F173BA154(1)250T	MDS15154(1)250B53P3TUBE
250	160	0.18	BA/50B	16.5	6.05	11.0	15	70	F173BA184(1)250T	MDS15184(1)250B53P3TUBE
250	160	0.22	BA/50B	16.5	6.05	11.0	15	58	F173BA224(1)250T	MDS15224(1)250B53P3TUBE
250	160	0.27	BA/50B	16.5	6.05	11.0	15	47	F173BA274(1)250T	MDS15274(1)250B53P3TUBE
250	160	0.33	BA/50B	16.5	6.05	11.0	15	39	F173BA334(1)250T	MDS15334(1)250B53P3TUBE
250	160	0.39	BA/50B	16.5	6.05	11.0	15	39	F173BA394(1)250T	MDS15394(1)250B53P3TUBE
250	160	0.47	BA/50B	16.5	6.05	11.0	15	30	F173BA474(1)250T	MDS15474(1)250B53P3TUBE
250	160	0.56	BA/50B	16.5	6.05	11.0	15	26	F173BA564(1)250T	MDS15564(1)250B53P3TUBE
250	160	0.68	BA/50B	16.5	6.05	11.0	15	21	F173BA684(1)250T	MDS15684(1)250B53P3TUBE
400	200	0.033	AA/00A	12.2	6.05	11.0	10	390	F173AA333(1)400T	MDS10333(1)400A52P3TUBE
400	200	0.039	AA/00A	12.2	6.05	11.0	10	330	F173AA393(1)400T	MDS10393(1)400A52P3TUBE
400	200	0.047	AA/00A	12.2	6.05	11.0	10	270	F173AA473(1)400T	MDS10473(1)400A52P3TUBE
400	200	0.056	AA/00A	12.2	6.05	11.0	10	230	F173AA563(1)400T	MDS10563(1)400A52P3TUBE
400	200	0.068	AA/00A	12.2	6.05	11.0	10	190	F173AA683(1)400T	MDS10683(1)400A52P3TUBE
400	200	0.082	AA/00A	12.2	6.05	11.0	10	160	F173AA823(1)400T	MDS10823(1)400A52P3TUBE
400	200	0.10	AA/00A	12.2	6.05	11.0	10	130	F173AA104(1)400T	MDS10104(1)400A52P3TUBE
400	200	0.12	AA/00A	12.2	6.05	11.0	10	110	F173AA124(1)400T	MDS10124(1)400A52P3TUBE
400	200	0.15	AA/00A	12.2	6.05	11.0	10	85	F173AA154(1)400T	MDS10154(1)400A52P3TUBE
400	200	0.18	AA/00A	12.2	6.05	11.0	10	70	F173AA184(1)400T	MDS10184(1)400A52P3TUBE
400	200	0.033	BA/00B	16.5	6.05	11.0	15	390	F173BA333(1)400T	MDS15333(1)400B53P3TUBE
400	200	0.039	BA/00B	16.5	6.05	11.0	15	330	F173BA393(1)400T	MDS15393(1)400B53P3TUBE
400	200	0.047	BA/00B	16.5	6.05	11.0	15	270	F173BA473(1)400T	MDS15473(1)400B53P3TUBE
400	200	0.056	BA/00B	16.5	6.05	11.0	15	230	F173BA563(1)400T	MDS15563(1)400B53P3TUBE
400	200	0.068	BA/00B	16.5	6.05	11.0	15	190	F173BA683(1)400T	MDS15683(1)400B53P3TUBE
400	200	0.082	BA/00B	16.5	6.05	11.0	15	160	F173BA823(1)400T	MDS15823(1)400B53P3TUBE
400	200	0.10	BA/00B	16.5	6.05	11.0	15	130	F173BA104(1)400T	MDS15104(1)400B53P3TUBE
400	200	0.12	BA/00B	16.5	6.05	11.0	15	110	F173BA124(1)400T	MDS15124(1)400B53P3TUBE
400	200	0.15	BA/00B	16.5	6.05	11.0	15	85	F173BA154(1)400T	MDS15154(1)400B53P3TUBE
400	200	0.18	BA/00B	16.5	6.05	11.0	15	70	F173BA184(1)400T	MDS15184(1)400B53P3TUBE
400	200	0.22	BA/00B	16.5	6.05	11.0	15	58	F173BA224(1)400T	MDS15224(1)400B53P3TUBE
400	200	0.27	BA/00B	16.5	6.05	11.0	15	47	F173BA274(1)400T	MDS15274(1)400B53P3TUBE
400	200	0.33	BA/00B	16.5	6.05	12.2	15	39	F17(2)BA334(1)400T	MDS15334(1)400B55P(2)TUBE
630	220	0.033	AA/30A	12.2	6.05	11.0	10	390	F173AA333(1)630T	MDS10333(1)630A52P3TUBE
630	220	0.039	AA/30A	12.2	6.05	11.0	10	330	F173AA393(1)630T	MDS10393(1)630A52P3TUBE
630	220	0.047	AA/30A	12.2	6.05	11.0	10	270	F173AA473(1)630T	MDS10473(1)630A52P3TUBE
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**ESR 500 kHz (mΩ)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.
(2) = Number of leads per side, 3 or 4.
(3) = Number of leads per side, 3, 4 or 5.

Table 1 – Ratings & Part Number Reference cont'd

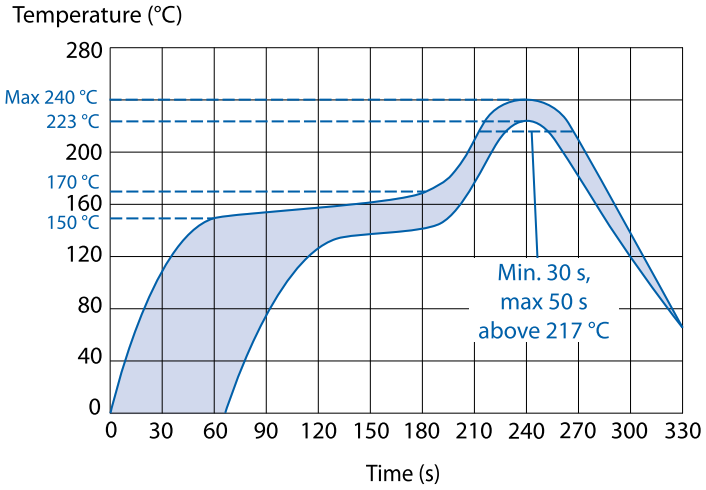
VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Lead Spacing (p)	ESR 500 kHz (mΩ)	New KEMET Part Number	Legacy Part Number
				B	H	L				
630	220	0.056	AA/30A	12.2	6.05	11.0	10	230	F173AA563(1)630T	MDS10563(1)630A52P3TUBE
630	220	0.068	AA/30A	12.2	6.05	13.5	10	190	F17(2)AA683(1)630T	MDS10683(1)630A54P(2)TUBE
630	220	0.033	BA/30B	16.5	6.05	11.0	15	390	F173BA333(1)630T	MDS15333(1)630B53P3TUBE
630	220	0.039	BA/30B	16.5	6.05	11.0	15	330	F173BA393(1)630T	MDS15393(1)630B53P3TUBE
630	220	0.047	BA/30B	16.5	6.05	11.0	15	270	F173BA473(1)630T	MDS15473(1)630B53P3TUBE
630	220	0.056	BA/30B	16.5	6.05	11.0	15	230	F173BA563(1)630T	MDS15563(1)630B53P3TUBE
630	220	0.068	BA/30B	16.5	6.05	11.0	15	190	F173BA683(1)630T	MDS15683(1)630B53P3TUBE
630	220	0.082	BA/30B	16.5	6.05	11.0	15	160	F173BA823(1)630T	MDS15823(1)630B53P3TUBE
630	220	0.10	BA/30B	16.5	6.05	11.0	15	130	F173BA104(1)630T	MDS15104(1)630B53P3TUBE
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (p)**	**ESR 500 kHz (mΩ)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.
(2) = Number of leads per side, 3 or 4.
(3) = Number of leads per side, 3, 4 or 5.

Soldering Process

Reflow soldering temperature is measured on the top surface of the component. Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 240°C.

A lead-free soldering process for this series is in development. Please contact KEMET for details.



Marking

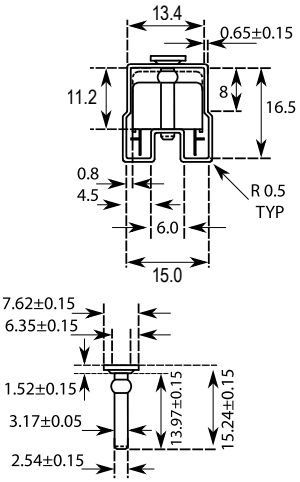
- KEMET
- Capacitance
- Capacitance tolerance code
- Rated voltage
- Capacitor family code MDS

Packaging Quantities

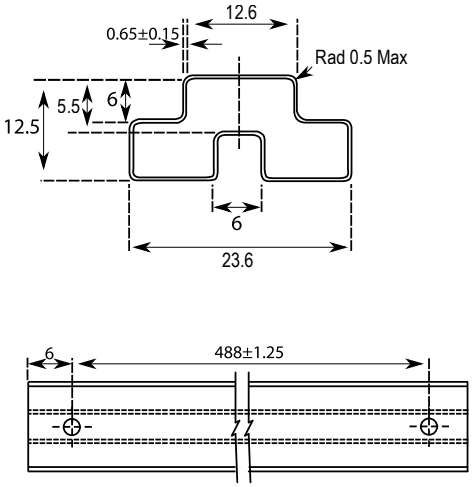
Size Code	Lead Spacing	Base (mm)	Height (mm)	Length mm)	Bulk	Reel
A52	10.0	12.2	6.05	11.0	43	
A53		12.7	9.0	14.0	34	200
A54		12.2	6.05	13.5	35	
A55		12.2	6.05	16.5	28	
A57		12.7	9.0	23.0	21	
A58		12.7	11.0	23.0	21	
B53	15.0	16.5	6.05	11.0	43	
B55		16.5	6.05	12.2	39	

Tube Packaging

Tube A



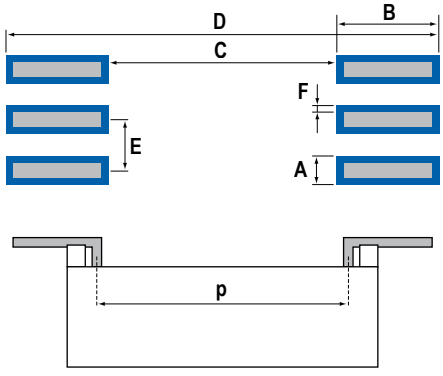
Tube B



Size Code	Dimensions in mm	Tube
A52	10.0 – 12.2 x 6.05 x 11.0	Tube B
A53	10.0 – 12.7 x 9.0 x 14.0	Tube A
A54	10.0 – 12.2 x 6.05 x 13.5	Tube B
A55	10.0 – 12.2 x 6.05 x 16.5	Tube B
A57	10.0 – 12.7 x 9.0 x 23.0	Tube A
A58	10.0 – 12.7 x 11.0 x 23.0	Tube A

Landing

Size	Dimensions in mm						
	p	A	B	C	D	E	F
A52	10	1	2	9.15	13.15	2.54	0.25
A53	10	1	2	9.15	13.15	2.54	0.25
A54	10	1	2	9.15	13.15	2.54	0.25
A55	10	1	2	9.15	13.15	2.54	0.25
A57	10	1	2	9.15	13.15	2.54	0.25
A58	10	1	2	9.15	13.15	2.54	0.25
B53	15	1	2	14.15	18.15	2.54	0.25
B55	15	1	2	14.15	18.15	2.54	0.25



LDE Series Unencapsulated Stacked Chip, Size 1206 – 6054, 50 – 1,000 VDC (Automotive Grade)

Overview

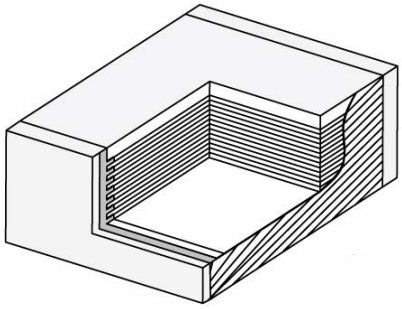
Polyethylene naphthalate (PEN) film capacitor for surface mounting which meets the demanding Automotive Electronics Council's AEC–Q200 qualification requirements.

Applications

Typical applications include bypassing and signal coupling. LDE is a general purpose series designed for the highest reliability and high temperature service. Not suitable for across-the-line application (see suppressor capacitors).

Benefits

- Rated voltage: 50 – 1,000 VDC
- Rated voltage: 40 – 250 VAC
- Capacitance range: 0.001 – 4.7 µF
- EIA size: 1206 – 6054
- Capacitance tolerance: ±10%, ±20%, ±5% on request
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of -55˚C to +125˚C
- Automotive (AEC–Q200) grades available



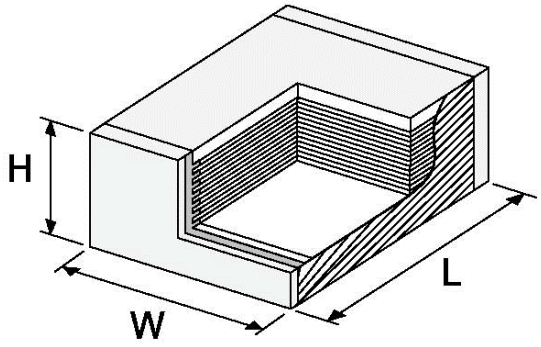
Part Number System

LDE	C	C	2560	M	A	5	N	00
Series	Rated Voltage (VDC)	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Dielectric	Version	Packaging	Internal Use
Metallized PEN	C = 50 D = 63 E = 100 I = 250 M = 400 P = 630 Q = 1000	See Dimension Table	Digits 2-4 indicate the first three digits of the capacitance value. First digit indicates the number of zeros to be added.	K = ±10% M = ±20% J = ±5% on request	A = PEN	5 = Standard 0 = Miniature	See Ordering Options Table	00 (Standard)

Ordering Options Table

Packaging Type	Packaging Code
Standard Packaging Options	
Tape & Reel (Standard Reel)	N

Dimensions – Millimeters



Size Code	Chip Size (EIA)	W		H	L	
		Nominal	Tolerance		Nominal	Tolerance
A	1206	1.7	+/-0.2	See Part Number Table	3.3	+0.3/-0.1
B	1210	2.5	+/-0.3		3.3	+0.3/-0.1
C	1812	3.3	+/-0.3		4.7	+0.3/-0.2
D	2220	5.0	+/-0.4		6.0	+/-0.3
E	2824	6.1	+/-0.4		7.3	+/-0.4
F	4030	7.9	+/-0.5		10.5	+/-0.4
G	5040	10.4	+/-0.5		13.0	+/-0.4
H	6054	13.7	+/-0.5		15.5	+/-0.4

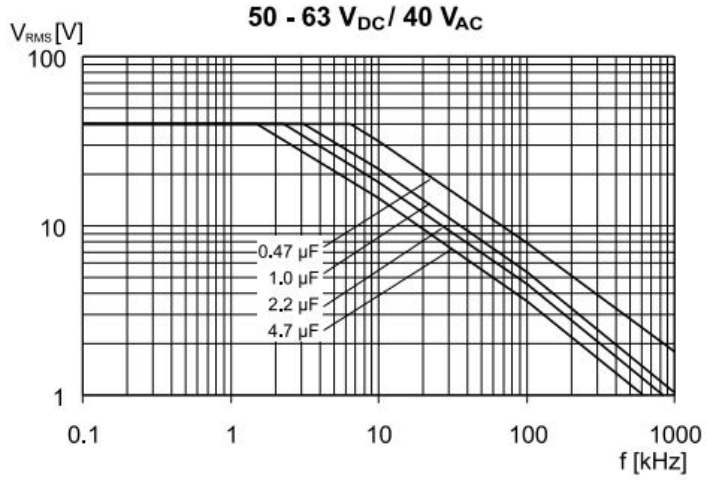
Performance Characteristics

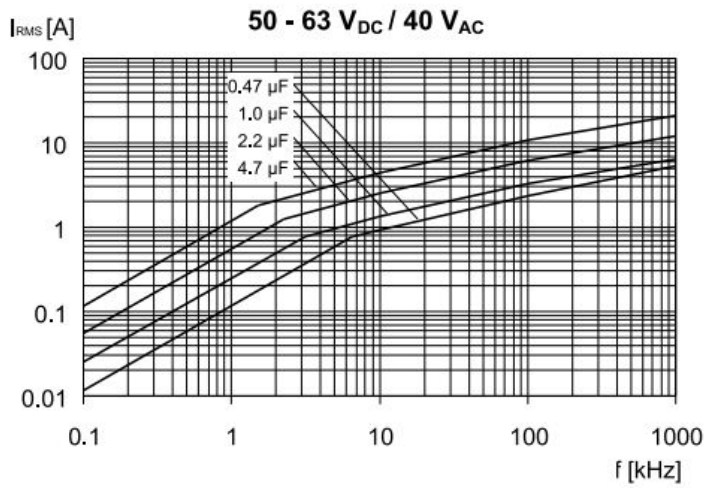
Rated Voltage (VDC)	50	63	100	250	400	630	1000
Rated Voltage (VAC)	40	40	63	120	160	200	250
Capacitance Range (µF)	0.001 – 4.7	0.001 – 4.7	0.001 – 4.7	0.001 – 1.5	0.015 – 0.47	0.001 – 0.27	0.001 – 0.1
Chip Size (EIA)	1206 – 6054						
Capacitance Values	E12 series						
Capacitance Tolerance	±10%, ±20%, ±5% on request						
Category Temperature Range	-55°C to +125°C						
Rated Temperature	+105°C						
Voltage Derating	The rated voltage is decreased with 1.25%/°C from +105°C to +125°C						
Climatic Category	55/125/56						
Capacitance Drift	Maximum 3% (sizes ≤ 22.20) after a 2 year storage period at a temperature of +10°C to +40°C and a relative humidity of 40% to 60%						
	Maximum 2% (sizes > 22.20) after a 2 year storage period at a temperature of +10°C to +40°C and a relative humidity of 40% to 60%						
Reliability (Reference MIL-HDBK-217)	Failure rate ≤ 1 FIT, T = +40°C, V = 0.5 x V_R						
	1 FIT = 10^{-9} failures / (components * hours)						
	Failure criteria: open or short circuit, cap. change > 10%, DF 2 times the catalog limits, IR < 0.005 x initial limit						
Insulation Resistance	Measured at +25°C ±5°C						
	Minimum Value Between Terminals						
	C ≤ 0.33 µF			1,000 MΩ			
	C > 0.33 µF			400 MΩ • µF			
	Charging time: 1 minute Charging voltage: 10 V_{DC} for V_R < 100 V_{DC} 100 V_{DC} for V_R ≥ 100 V_{DC}						
Dissipation Factor	Maximum Values at 25°C ±5°C						
	1 kHz			0.8%			
Surge Voltage Test	1.4 x V_R (2 seconds; T = 25 ± 5°C) for V_R ≤ 630 V_{DC}						
	1.5 x V_R (2 seconds; T = 25 ± 5°C) for V_R = 1,000 V_{DC}						
Maximum dv/dt	100 V/us for V_R ≤ 630 V_{DC}						
	300 V/us for V_R = 1,000 V_{DC}						

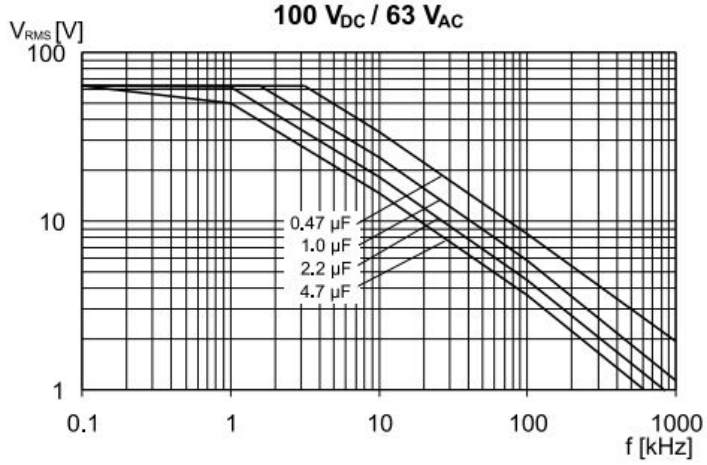
Qualification

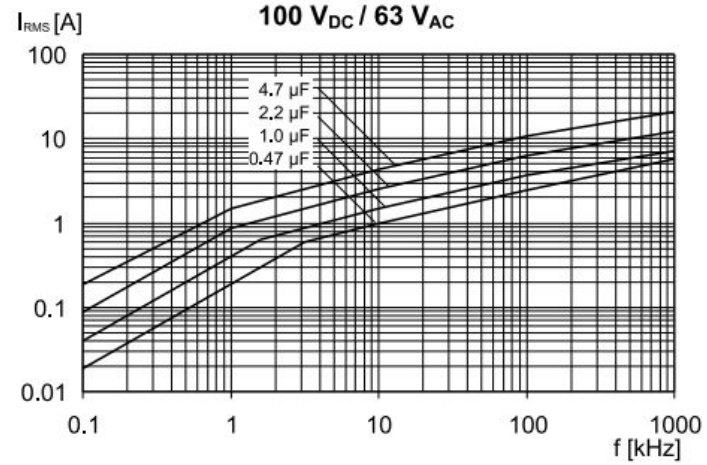
Automotive Grade products meet or exceed the requirements outlined by the Automotive Electronics Council. Details regarding test methods and conditions are referenced in document AEC–Q200, Stress Test Qualification for Passive Components. For additional information regarding the Automotive Electronics Council and AEC–Q200, please visit their website at www.aecouncil.com.

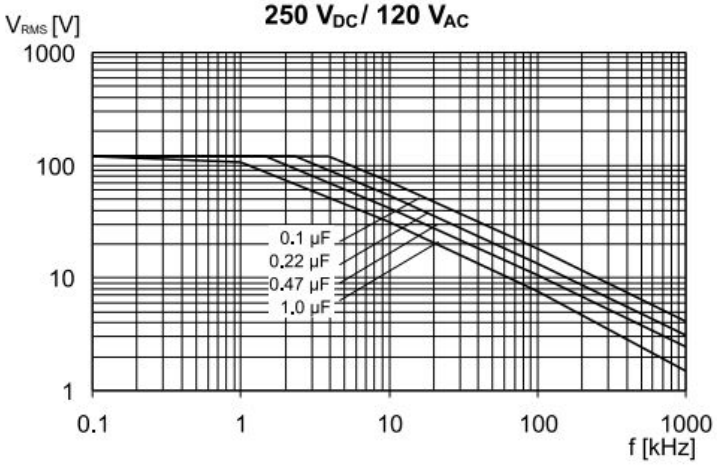
Maximum V_{rms} and I_{rms} vs. Frequency (Sinusoidal Waveform/Th* ≤ +85ºC)

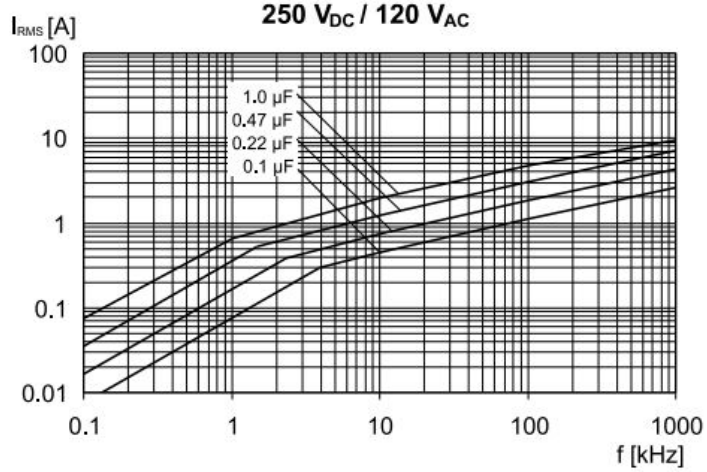






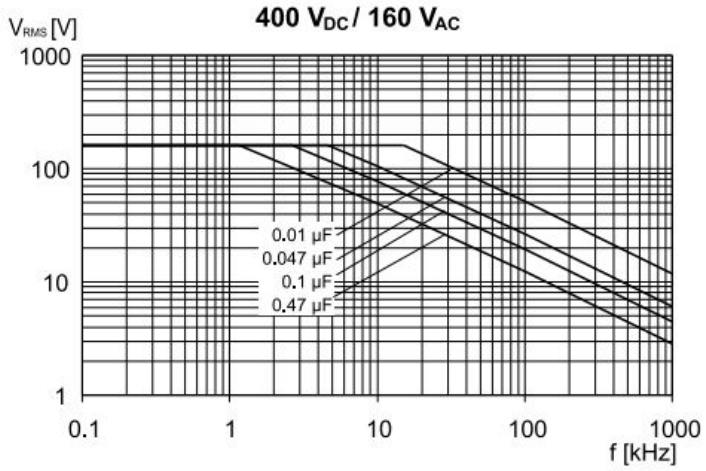


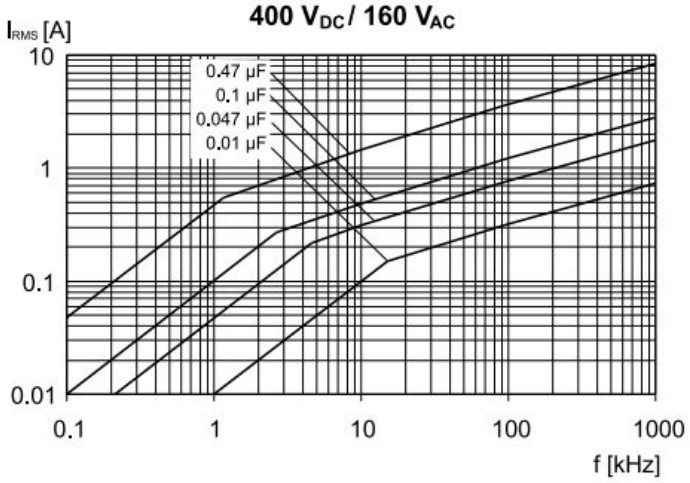


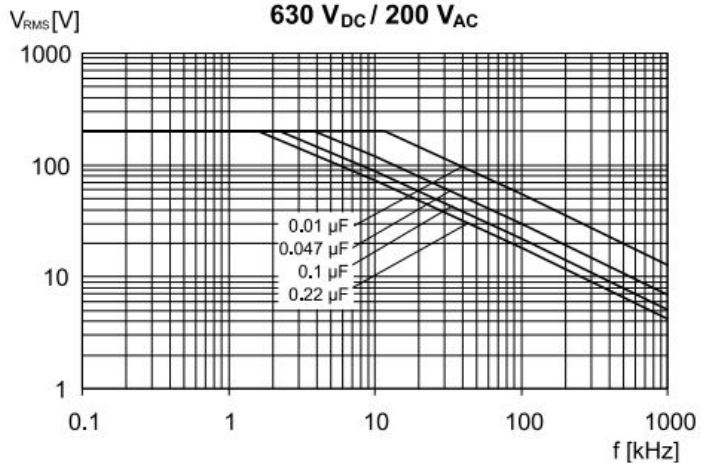


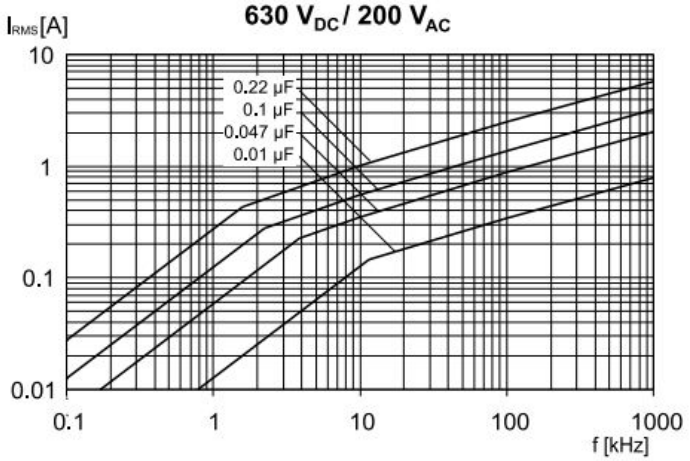
**Maximum ambient temperature surrounding the capacitor or hottest contact point, e.g., tracks, whichever is higher, in the worst operating conditions in °C. Measurements performed in free air condition.*

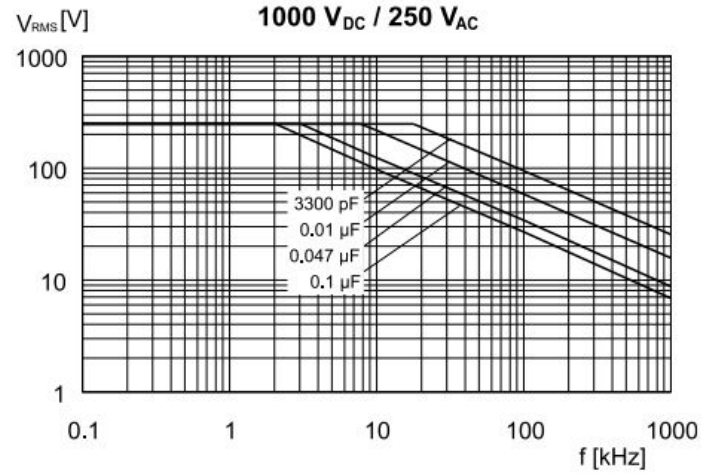
Maximum V_{rms} and I_{rms} vs. Frequency (Sinusoidal Waveform/Th* ≤ +85ºC)

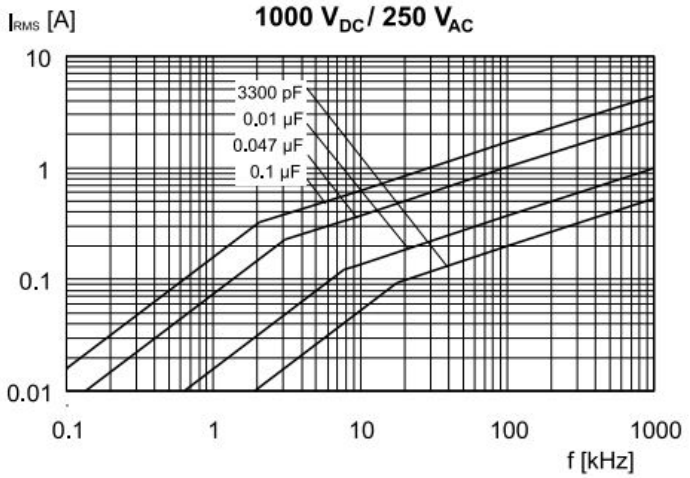










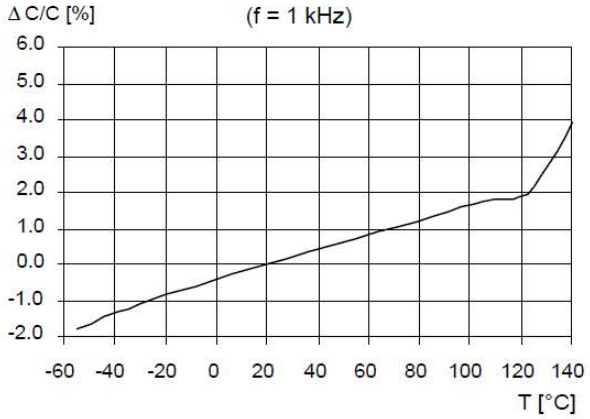


**Maximum ambient temperature surrounding the capacitor or hottest contact point, e.g., tracks, whichever is higher, in the worst operating conditions in °C. Measurements performed in free air condition.*

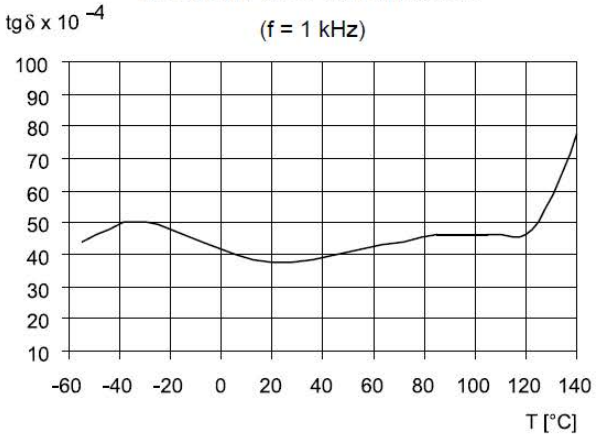
PEN Dielectric Typical Temperature Graphs

PEN

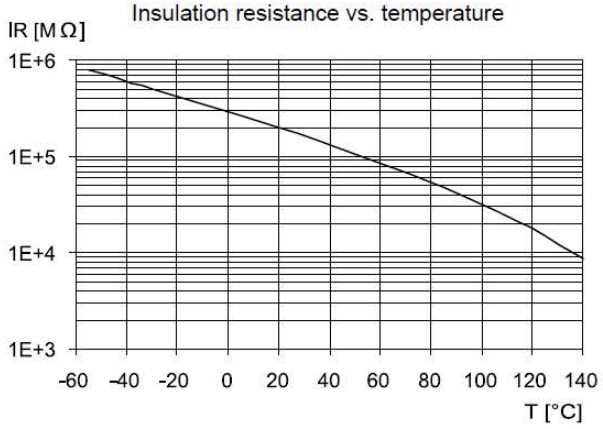
Capacitance vs. temperature



Dissipation factor vs. temperature



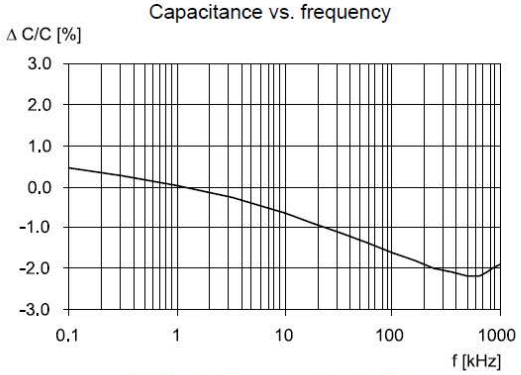
Insulation resistance vs. temperature



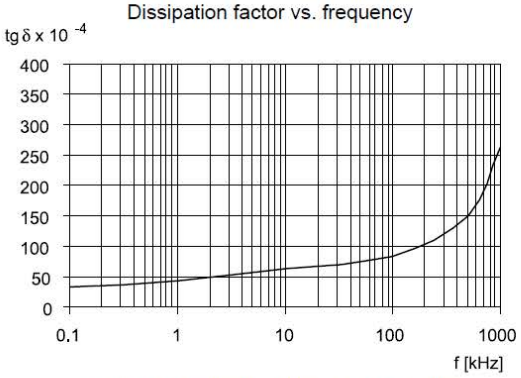
PEN Dielectric Typical Frequency Graphs

PEN

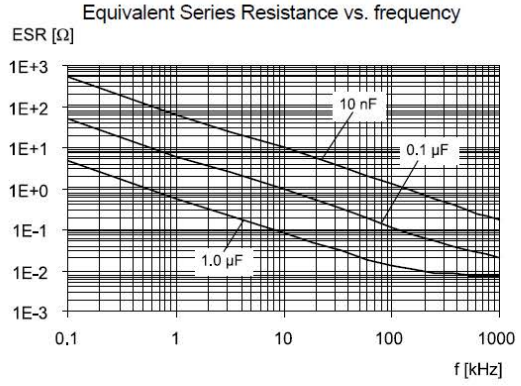
Capacitance vs. frequency



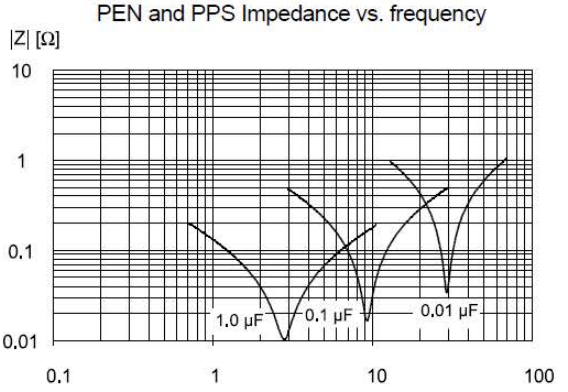
Dissipation factor vs. frequency



Equivalent Series Resistance vs. frequency



PEN and PPS Impedance vs. frequency



Note: measurements performed at T = 25 ± 5°C

Environmental Test Data

Damp Heat, Steady State	
Test Conditions	
Temperature	+40°C ±2°C
Relative Humidity (RH)	93% ±2%
Test Duration	56 days
Performance	
Capacitance Change |Δ C/C|	≤ 7%
DF Change (Δtgδ)	≤ 50 x 10^{-4} at 1 kHz
Insulation Resistance	≥ 50% of limit value

Endurance	
Test Conditions	
Temperature	125°C ±2°C
Test Duration	2,000 hours
Voltage Applied	1.25 x V_C
Performance	
Capacitance Change |Δ C/C|	≤ 5%
DF Change (Δtgδ)	≤ 50 x 10^{-4} at 1 kHz
Insulation Resistance	≥ 50% of limit value

Rapid Change of Temperature	
Test Conditions	
Temperature	1 hour at -55°C, 1 hour at +125°C
Number of Cycles	1,000
Performance	
Capacitance Change |Δ C/C|	≤ 5%
DF Change (Δtgδ)	≤ 50 x 10^{-4} at 1 kHz
Insulation Resistance	≥ limit value
No Mechanical Damage	

Reflow	
Test Conditions	See Solder Process
Performance	
Capacitance Change |Δ C/C|	≤ 3%
DF Change (Δtgδ)	≤ 50 x 10^{-4} at 1 kHz
Insulation Resistance	≥ limit value
No Mechanical Damage	

Bending	
Test Conditions	
Deflection	1 to 6 mm
Performance	
Capacitance Change |Δ C/C|	≤ 1%
No visible damage on the terminations (pealing) neither on the body (cracking)	

Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

Table 1 – Ratings & Part Number Reference

VDC	VAC	Capacitance Value (µF)	Size Code	Chip Size	Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
					B	H	L			
50	40	0.001	A	1206	1.7	1.1	3.3	100	DECA1100(1)A0N00	LDECA1100(1)A0N00
50	40	0.0012	A	1206	1.7	1.1	3.3	100	DECA1120(1)A0N00	LDECA1120(1)A0N00
50	40	0.0015	C	1812	3.3	1.7	4.7	100	DECC1150(1)A5N00	LDECC1150(1)A5N00
50	40	0.0015	A	1206	1.7	1.1	3.3	100	DECA1150(1)A0N00	LDECA1150(1)A0N00
50	40	0.0018	C	1812	3.3	1.7	4.7	100	DECC1180(1)A5N00	LDECC1180(1)A5N00
50	40	0.0018	A	1206	1.7	1.1	3.3	100	DECA1180(1)A0N00	LDECA1180(1)A0N00
50	40	0.0022	C	1812	3.3	1.7	4.7	100	DECC1220(1)A5N00	LDECC1220(1)A5N00
50	40	0.0022	A	1206	1.7	1.1	3.3	100	DECA1220(1)A0N00	LDECA1220(1)A0N00
50	40	0.0027	C	1812	3.3	1.8	4.7	100	DECC1270(1)A5N00	LDECC1270(1)A5N00
50	40	0.0027	A	1206	1.7	1.1	3.3	100	DECA1270(1)A0N00	LDECA1270(1)A0N00
50	40	0.0033	C	1812	3.3	1.7	4.7	100	DECC1330(1)A5N00	LDECC1330(1)A5N00
50	40	0.0033	A	1206	1.7	1.2	3.3	100	DECA1330(1)A0N00	LDECA1330(1)A0N00
50	40	0.0039	C	1812	3.3	1.7	4.7	100	DECC1390(1)A5N00	LDECC1390(1)A5N00
50	40	0.0039	A	1206	1.7	1.1	3.3	100	DECA1390(1)A0N00	LDECA1390(1)A0N00
50	40	0.0047	C	1812	3.3	1.8	4.7	100	DECC1470(1)A5N00	LDECC1470(1)A5N00
50	40	0.0047	A	1206	1.7	1.1	3.3	100	DECA1470(1)A0N00	LDECA1470(1)A0N00
50	40	0.0056	C	1812	3.3	1.7	4.7	100	DECC1560(1)A5N00	LDECC1560(1)A5N00
50	40	0.0056	A	1206	1.7	1.1	3.3	100	DECA1560(1)A0N00	LDECA1560(1)A0N00
50	40	0.0068	C	1812	3.3	1.7	4.7	100	DECC1680(1)A5N00	LDECC1680(1)A5N00
50	40	0.0068	A	1206	1.7	1.1	3.3	100	DECA1680(1)A0N00	LDECA1680(1)A0N00
50	40	0.0082	C	1812	3.3	1.8	4.7	100	DECC1820(1)A5N00	LDECC1820(1)A5N00
50	40	0.0082	A	1206	1.7	1.1	3.3	100	DECA1820(1)A0N00	LDECA1820(1)A0N00
50	40	0.01	C	1812	3.3	1.7	4.7	100	DECC2100(1)A5N00	LDECC2100(1)A5N00
50	40	0.01	A	1206	1.7	1.1	3.3	100	DECA2100(1)A0N00	LDECA2100(1)A0N00
50	40	0.012	C	1812	3.3	1.7	4.7	100	DECC2120(1)A5N00	LDECC2120(1)A5N00
50	40	0.012	A	1206	1.7	1.1	3.3	100	DECA2120(1)A0N00	LDECA2120(1)A0N00
50	40	0.015	C	1812	3.3	1.7	4.7	100	DECC2150(1)A5N00	LDECC2150(1)A5N00
50	40	0.015	A	1206	1.7	1.2	3.3	100	DECA2150(1)A0N00	LDECA2150(1)A0N00
50	40	0.018	C	1812	3.3	1.8	4.7	100	DECC2180(1)A5N00	LDECC2180(1)A5N00
50	40	0.018	A	1206	1.7	1.1	3.3	100	DECA2180(1)A0N00	LDECA2180(1)A0N00
50	40	0.022	C	1812	3.3	1.7	4.7	100	DECC2220(1)A5N00	LDECC2220(1)A5N00
50	40	0.022	A	1206	1.7	1.1	3.3	100	DECA2220(1)A0N00	LDECA2220(1)A0N00
50	40	0.027	C	1812	3.3	1.7	4.7	100	DECC2270(1)A5N00	LDECC2270(1)A5N00
50	40	0.027	A	1206	1.7	1.1	3.3	100	DECA2270(1)A0N00	LDECA2270(1)A0N00
50	40	0.033	C	1812	3.3	1.8	4.7	100	DECC2330(1)A5N00	LDECC2330(1)A5N00
50	40	0.033	B	1210	2.5	2.0	3.3	100	DECB2330(1)A0N00	LDECB2330(1)A0N00
50	40	0.033	A	1206	1.7	1.2	3.3	100	DECA2330(2)A0N00	LDECA2330(2)A0N00
50	40	0.039	C	1812	3.3	1.7	4.7	100	DECC2390(1)A5N00	LDECC2390(1)A5N00
50	40	0.039	B	1210	2.5	2.1	3.3	100	DECB2390(1)A0N00	LDECB2390(1)A0N00
50	40	0.047	C	1812	3.3	1.7	4.7	100	DECC2470(1)A5N00	LDECC2470(1)A5N00
50	40	0.047	B	1210	2.5	2.1	3.3	100	DECB2470(1)A0N00	LDECB2470(1)A0N00
50	40	0.056	C	1812	3.3	1.7	4.7	100	DECC2560(1)A5N00	LDECC2560(1)A5N00
50	40	0.056	B	1210	2.5	1.7	3.3	100	DECB2560(1)A0N00	LDECB2560(1)A0N00
50	40	0.068	C	1812	3.3	1.8	4.7	100	DECC2680(1)A5N00	LDECC2680(1)A5N00
50	40	0.068	B	1210	2.5	2.0	3.3	100	DECB2680(1)A0N00	LDECB2680(1)A0N00
50	40	0.082	C	1812	3.3	2.1	4.7	100	DECC2820(1)A5N00	LDECC2820(1)A5N00
50	40	0.082	B	1210	2.5	2.1	3.3	100	DECB2820(1)A0N00	LDECB2820(1)A0N00
50	40	0.1	C	1812	3.3	2.4	4.7	100	DECC3100(1)A5N00	LDECC3100(1)A5N00
50	40	0.1	B	1210	2.5	2.1	3.3	100	DECB3100(1)A0N00	LDECB3100(1)A0N00
50	40	0.12	C	1812	3.3	1.7	4.7	100	DECC3120(1)A5N00	LDECC3120(1)A5N00
50	40	0.15	C	1812	3.3	1.9	4.7	100	DECC3150(1)A5N00	LDECC3150(1)A5N00
50	40	0.18	C	1812	3.3	2.2	4.7	100	DECC3180(1)A5N00	LDECC3180(1)A5N00
50	40	0.22	C	1812	3.3	2.4	4.7	100	DECC3220(1)A5N00	LDECC3220(1)A5N00
50	40	0.27	D	2220	5.0	1.9	6.0	100	DECD3270(1)A5N00	LDECD3270(1)A5N00
50	40	0.33	D	2220	5.0	1.9	6.0	100	DECD3330(1)A5N00	LDECD3330(1)A5N00
50	40	0.39	D	2220	5.0	2.1	6.0	100	DECD3390(1)A5N00	LDECD3390(1)A5N00
50	40	0.47	D	2220	5.0	2.4	6.0	100	DECD3470(1)A5N00	LDECD3470(1)A5N00
50	40	0.56	D	2220	5.0	2.8	6.0	100	DECD3560(1)A5N00	LDECD3560(1)A5N00
50	40	0.68	D	2220	5.0	3.3	6.0	100	DECD3680(1)A5N00	LDECD3680(1)A5N00
VDC	VAC	Capacitace Value (µF)	Size Code	Chip Size	B (mm)	H (mm)	L (mm)	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) K = ±10%, M = ±20%, J = ±5% on request.
(2) Only K and M tolerances available.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code	Chip Size	Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
					B	H	L			
50	40	0.82	E	2824	6.1	2.9	7.3	100	DECE3820(1)A5N00	LDECE3820(1)A5N00
50	40	0.82	D	2220	5.0	3.7	6.0	100	DECD3820(1)A0N00	LDECD3820(1)A0N00
50	40	1.0	E	2824	6.1	3.1	7.3	100	DECE4100(1)A5N00	LDECE4100(1)A5N00
50	40	1.0	D	2220	5.0	4.4	6.0	100	DECD4100(1)A0N00	LDECD4100(1)A0N00
50	40	1.2	E	2824	6.1	3.6	7.3	100	DECE4120(1)A5N00	LDECE4120(1)A5N00
50	40	1.5	G	5040	10.4	3.1	13.0	100	DECG4150(1)A5N00	LDECG4150(1)A5N00
50	40	1.5	E	2824	6.1	4.3	7.3	100	DECE4150(1)A0N00	LDECE4150(1)A0N00
50	40	1.8	G	5040	10.4	3.4	13.0	100	DECG4180(1)A5N00	LDECG4180(1)A5N00
50	40	1.8	E	2824	6.1	5.1	7.3	100	DECE4180(1)A0N00	LDECE4180(1)A0N00
50	40	2.2	G	5040	10.4	4.1	13.0	100	DECG4220(1)A5N00	LDECG4220(1)A5N00
50	40	2.2	F	4030	7.9	3.3	10.5	100	DECF4220(1)A0N00	LDECF4220(1)A0N00
50	40	2.7	G	5040	10.4	4.9	13.0	100	DECG4270(1)A5N00	LDECG4270(1)A5N00
50	40	2.7	F	4030	7.9	4.0	10.5	100	DECF4270(1)A0N00	LDECF4270(1)A0N00
50	40	3.3	H	6054	13.7	3.9	15.5	100	DECH4330(1)A5N00	LDECH4330(1)A5N00
50	40	3.3	F	4030	7.9	4.7	10.5	100	DECF4330(1)A0N00	LDECF4330(1)A0N00
50	40	3.9	H	6054	13.7	4.5	15.5	100	DECH4390(1)A5N00	LDECH4390(1)A5N00
50	40	3.9	F	4030	7.9	5.5	10.5	100	DECF4390(1)A0N00	LDECF4390(1)A0N00
50	40	4.7	H	6054	13.7	5.3	15.5	100	DECH4470(1)A5N00	LDECH4470(1)A5N00
50	40	4.7	G	5040	10.4	4.1	13.0	100	DECG4470(1)A0N00	LDECG4470(1)A0N00
63	40	0.001	A	1206	1.7	1.1	3.3	100	DEDA1100(1)A0N00	LDEDA1100(1)A0N00
63	40	0.0012	A	1206	1.7	1.1	3.3	100	DEDA1120(1)A0N00	LDEDA1120(1)A0N00
63	40	0.0015	C	1812	3.3	1.7	4.7	100	DEDC1150(1)A5N00	LDEDC1150(1)A5N00
63	40	0.0015	A	1206	1.7	1.1	3.3	100	DEDA1150(1)A0N00	LDEDA1150(1)A0N00
63	40	0.0018	C	1812	3.3	1.7	4.7	100	DEDC1180(1)A5N00	LDEDC1180(1)A5N00
63	40	0.0018	A	1206	1.7	1.1	3.3	100	DEDA1180(1)A0N00	LDEDA1180(1)A0N00
63	40	0.0022	C	1812	3.3	1.7	4.7	100	DEDC1220(1)A5N00	LDEDC1220(1)A5N00
63	40	0.0022	A	1206	1.7	1.1	3.3	100	DEDA1220(1)A0N00	LDEDA1220(1)A0N00
63	40	0.0027	C	1812	3.3	1.8	4.7	100	DEDC1270(1)A5N00	LDEDC1270(1)A5N00
63	40	0.0027	A	1206	1.7	1.1	3.3	100	DEDA1270(1)A0N00	LDEDA1270(1)A0N00
63	40	0.0033	C	1812	3.3	1.7	4.7	100	DEDC1330(1)A5N00	LDEDC1330(1)A5N00
63	40	0.0033	A	1206	1.7	1.2	3.3	100	DEDA1330(1)A0N00	LDEDA1330(1)A0N00
63	40	0.0039	C	1812	3.3	1.7	4.7	100	DEDC1390(1)A5N00	LDEDC1390(1)A5N00
63	40	0.0039	A	1206	1.7	1.1	3.3	100	DEDA1390(1)A0N00	LDEDA1390(1)A0N00
63	40	0.0047	C	1812	3.3	1.8	4.7	100	DEDC1470(1)A5N00	LDEDC1470(1)A5N00
63	40	0.0047	A	1206	1.7	1.1	3.3	100	DEDA1470(1)A0N00	LDEDA1470(1)A0N00
63	40	0.0056	C	1812	3.3	1.7	4.7	100	DEDC1560(1)A5N00	LDEDC1560(1)A5N00
63	40	0.0056	A	1206	1.7	1.1	3.3	100	DEDA1560(1)A0N00	LDEDA1560(1)A0N00
63	40	0.0068	C	1812	3.3	1.7	4.7	100	DEDC1680(1)A5N00	LDEDC1680(1)A5N00
63	40	0.0068	A	1206	1.7	1.1	3.3	100	DEDA1680(1)A0N00	LDEDA1680(1)A0N00
63	40	0.0082	C	1812	3.3	1.8	4.7	100	DEDC1820(1)A5N00	LDEDC1820(1)A5N00
63	40	0.0082	A	1206	1.7	1.1	3.3	100	DEDA1820(1)A0N00	LDEDA1820(1)A0N00
63	40	0.01	C	1812	3.3	1.7	4.7	100	DEDC2100(1)A5N00	LDEDC2100(1)A5N00
63	40	0.01	A	1206	1.7	1.1	3.3	100	DEDA2100(1)A0N00	LDEDA2100(1)A0N00
63	40	0.012	C	1812	3.3	1.7	4.7	100	DEDC2120(1)A5N00	LDEDC2120(1)A5N00
63	40	0.012	A	1206	1.7	1.1	3.3	100	DEDA2120(1)A0N00	LDEDA2120(1)A0N00
63	40	0.015	C	1812	3.3	1.7	4.7	100	DEDC2150(1)A5N00	LDEDC2150(1)A5N00
63	40	0.015	A	1206	1.7	1.2	3.3	100	DEDA2150(1)A0N00	LDEDA2150(1)A0N00
63	40	0.018	C	1812	3.3	1.8	4.7	100	DEDC2180(1)A5N00	LDEDC2180(1)A5N00
63	40	0.018	A	1206	1.7	1.1	3.3	100	DEDA2180(1)A0N00	LDEDA2180(1)A0N00
63	40	0.022	C	1812	3.3	1.7	4.7	100	DEDC2220(1)A5N00	LDEDC2220(1)A5N00
63	40	0.022	A	1206	1.7	1.1	3.3	100	DEDA2220(1)A0N00	LDEDA2220(1)A0N00
63	40	0.027	C	1812	3.3	1.7	4.7	100	DEDC2270(1)A5N00	LDEDC2270(1)A5N00
63	40	0.027	A	1206	1.7	1.1	3.3	100	DEDA2270(1)A0N00	LDEDA2270(1)A0N00
63	40	0.033	C	1812	3.3	1.8	4.7	100	DEDC2330(1)A5N00	LDEDC2330(1)A5N00
63	40	0.033	B	1210	2.5	2.0	3.3	100	DEDB2330(1)A0N00	LDEDB2330(1)A0N00
63	40	0.033	A	1206	1.7	1.2	3.3	100	DEDA2330(2)A0N00	LDEDA2330(2)A0N00
63	40	0.039	C	1812	3.3	1.7	4.7	100	DEDC2390(1)A5N00	LDEDC2390(1)A5N00
63	40	0.039	B	1210	2.5	2.1	3.3	100	DEDB2390(1)A0N00	LDEDB2390(1)A0N00
63	40	0.047	C	1812	3.3	1.7	4.7	100	DEDC2470(1)A5N00	LDEDC2470(1)A5N00
VDC	**VAC**	**Capacitace Value (µF)**	**Size Code**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, J = ±5% on request.
(2) Only K and M tolerances available.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code	Chip Size	Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
					B	H	L			
63	40	0.047	B	1210	2.5	2.1	3.3	100	DEDB2470(1)A0N00	LDEDB2470(1)A0N00
63	40	0.056	C	1812	3.3	1.7	4.7	100	DEDC2560(1)A5N00	LDEDC2560(1)A5N00
63	40	0.056	B	1210	2.5	1.7	3.3	100	DEDB2560(1)A0N00	LDEDB2560(1)A0N00
63	40	0.068	C	1812	3.3	1.8	4.7	100	DEDC2680(1)A5N00	LDEDC2680(1)A5N00
63	40	0.068	B	1210	2.5	2.0	3.3	100	DEDB2680(1)A0N00	LDEDB2680(1)A0N00
63	40	0.082	C	1812	3.3	2.1	4.7	100	DEDC2820(1)A5N00	LDEDC2820(1)A5N00
63	40	0.082	B	1210	2.5	2.1	3.3	100	DEDB2820(1)A0N00	LDEDB2820(1)A0N00
63	40	0.1	C	1812	3.3	2.4	4.7	100	DEDC3100(1)A5N00	LDEDC3100(1)A5N00
63	40	0.1	B	1210	2.5	2.1	3.3	100	DEDB3100(1)A0N00	LDEDB3100(1)A0N00
63	40	0.12	C	1812	3.3	1.7	4.7	100	DEDC3120(1)A5N00	LDEDC3120(1)A5N00
63	40	0.15	C	1812	3.3	1.9	4.7	100	DEDC3150(1)A5N00	LDEDC3150(1)A5N00
63	40	0.18	C	1812	3.3	2.2	4.7	100	DEDC3180(1)A5N00	LDEDC3180(1)A5N00
63	40	0.22	C	1812	3.3	2.4	4.7	100	DEDC3220(1)A5N00	LDEDC3220(1)A5N00
63	40	0.27	D	2220	5.0	1.9	6.0	100	DEDD3270(1)A5N00	LDEDD3270(1)A5N00
63	40	0.33	D	2220	5.0	1.9	6.0	100	DEDD3330(1)A5N00	LDEDD3330(1)A5N00
63	40	0.39	D	2220	5.0	2.1	6.0	100	DEDD3390(1)A5N00	LDEDD3390(1)A5N00
63	40	0.47	D	2220	5.0	2.4	6.0	100	DEDD3470(1)A5N00	LDEDD3470(1)A5N00
63	40	0.56	D	2220	5.0	2.8	6.0	100	DEDD3560(1)A5N00	LDEDD3560(1)A5N00
63	40	0.68	D	2220	5.0	3.3	6.0	100	DEDD3680(1)A5N00	LDEDD3680(1)A5N00
63	40	0.82	E	2824	6.1	2.9	7.3	100	DEDE3820(1)A5N00	LDEDE3820(1)A5N00
63	40	0.82	D	2220	5.0	3.7	6.0	100	DEDD3820(1)A0N00	LDEDD3820(1)A0N00
63	40	1.0	E	2824	6.1	3.1	7.3	100	DEDE4100(1)A5N00	LDEDE4100(1)A5N00
63	40	1.0	D	2220	5.0	4.4	6.0	100	DEDD4100(1)A0N00	LDEDD4100(1)A0N00
63	40	1.2	E	2824	6.1	3.6	7.3	100	DEDE4120(1)A5N00	LDEDE4120(1)A5N00
63	40	1.5	G	5040	10.4	3.1	13.0	100	DEDG4150(1)A5N00	LDEDG4150(1)A5N00
63	40	1.5	E	2824	6.1	4.3	7.3	100	DEDE4150(1)A0N00	LDEDE4150(1)A0N00
63	40	1.8	G	5040	10.4	3.4	13.0	100	DEDG4180(1)A5N00	LDEDG4180(1)A5N00
63	40	1.8	E	2824	6.1	5.1	7.3	100	DEDE4180(1)A0N00	LDEDE4180(1)A0N00
63	40	2.2	G	5040	10.4	4.1	13.0	100	DEDG4220(1)A5N00	LDEDG4220(1)A5N00
63	40	2.2	F	4030	7.9	3.3	10.5	100	DEDF4220(1)A0N00	LDEDF4220(1)A0N00
63	40	2.7	G	5040	10.4	4.9	13.0	100	DEDG4270(1)A5N00	LDEDG4270(1)A5N00
63	40	2.7	F	4030	7.9	4.0	10.5	100	DEDF4270(1)A0N00	LDEDF4270(1)A0N00
63	40	3.3	H	6054	13.7	3.9	15.5	100	DEDH4330(1)A5N00	LDEDH4330(1)A5N00
63	40	3.3	F	4030	7.9	4.7	10.5	100	DEDF4330(1)A0N00	LDEDF4330(1)A0N00
63	40	3.9	H	6054	13.7	4.5	15.5	100	DEDH4390(1)A5N00	LDEDH4390(1)A5N00
63	40	3.9	F	4030	7.9	5.5	10.5	100	DEDF4390(1)A0N00	LDEDF4390(1)A0N00
63	40	4.7	H	6054	13.7	5.3	15.5	100	DEDH4470(1)A5N00	LDEDH4470(1)A5N00
63	40	4.7	G	5040	10.4	4.1	13.0	100	DEDG4470(1)A0N00	LDEDG4470(1)A0N00
100	63	0.001	A	1206	1.7	1.1	3.3	100	DEEA1100(1)A0N00	LDEEA1100(1)A0N00
100	63	0.0012	A	1206	1.7	1.1	3.3	100	DEEA1120(1)A0N00	LDEEA1120(1)A0N00
100	63	0.0015	C	1812	3.3	1.7	4.7	100	DEEC1150(1)A5N00	LDEEC1150(1)A5N00
100	63	0.0015	A	1206	1.7	1.1	3.3	100	DEEA1150(1)A0N00	LDEEA1150(1)A0N00
100	63	0.0018	C	1812	3.3	1.7	4.7	100	DEEC1180(1)A5N00	LDEEC1180(1)A5N00
100	63	0.0018	A	1206	1.7	1.1	3.3	100	DEEA1180(1)A0N00	LDEEA1180(1)A0N00
100	63	0.0022	C	1812	3.3	1.7	4.7	100	DEEC1220(1)A5N00	LDEEC1220(1)A5N00
100	63	0.0022	A	1206	1.7	1.1	3.3	100	DEEA1220(1)A0N00	LDEEA1220(1)A0N00
100	63	0.0027	C	1812	3.3	1.8	4.7	100	DEEC1270(1)A5N00	LDEEC1270(1)A5N00
100	63	0.0027	A	1206	1.7	1.1	3.3	100	DEEA1270(1)A0N00	LDEEA1270(1)A0N00
100	63	0.0033	C	1812	3.3	1.7	4.7	100	DEEC1330(1)A5N00	LDEEC1330(1)A5N00
100	63	0.0033	A	1206	1.7	1.2	3.3	100	DEEA1330(1)A0N00	LDEEA1330(1)A0N00
100	63	0.0039	C	1812	3.3	1.7	4.7	100	DEEC1390(1)A5N00	LDEEC1390(1)A5N00
100	63	0.0039	A	1206	1.7	1.1	3.3	100	DEEA1390(1)A0N00	LDEEA1390(1)A0N00
100	63	0.0047	C	1812	3.3	1.8	4.7	100	DEEC1470(1)A5N00	LDEEC1470(1)A5N00
100	63	0.0047	A	1206	1.7	1.1	3.3	100	DEEA1470(1)A0N00	LDEEA1470(1)A0N00
100	63	0.0056	C	1812	3.3	1.7	4.7	100	DEEC1560(1)A5N00	LDEEC1560(1)A5N00
100	63	0.0056	A	1206	1.7	1.1	3.3	100	DEEA1560(1)A0N00	LDEEA1560(1)A0N00
100	63	0.0068	C	1812	3.3	1.7	4.7	100	DEEC1680(1)A5N00	LDEEC1680(1)A5N00
100	63	0.0068	A	1206	1.7	1.1	3.3	100	DEEA1680(1)A0N00	LDEEA1680(1)A0N00
100	63	0.0082	C	1812	3.3	1.8	4.7	100	DEEC1820(1)A5N00	LDEEC1820(1)A5N00
VDC	**VAC**	**Capacitace Value (µF)**	**Size Code**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, J = ±5% on request.
(2) Only K and M tolerances available.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code	Chip Size	Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
					B	H	L			
100	63	0.0082	A	1206	1.7	1.1	3.3	100	DEEA1820(1)A0N00	LDEEA1820(1)A0N00
100	63	0.01	C	1812	3.3	1.7	4.7	100	DEEC2100(1)A5N00	LDEEC2100(1)A5N00
100	63	0.01	A	1206	1.7	1.1	3.3	100	DEEA2100(1)A0N00	LDEEA2100(1)A0N00
100	63	0.012	C	1812	3.3	1.7	4.7	100	DEEC2120(1)A5N00	LDEEC2120(1)A5N00
100	63	0.012	A	1206	1.7	1.1	3.3	100	DEEA2120(1)A0N00	LDEEA2120(1)A0N00
100	63	0.015	C	1812	3.3	1.7	4.7	100	DEEC2150(1)A5N00	LDEEC2150(1)A5N00
100	63	0.015	A	1206	1.7	1.2	3.3	100	DEEA2150(1)A0N00	LDEEA2150(1)A0N00
100	63	0.018	C	1812	3.3	1.8	4.7	100	DEEC2180(1)A5N00	LDEEC2180(1)A5N00
100	63	0.018	B	1210	2.5	1.5	3.3	100	DEEB2180(1)A0N00	LDEEB2180(1)A0N00
100	63	0.022	C	1812	3.3	1.7	4.7	100	DEEC2220(1)A5N00	LDEEC2220(1)A5N00
100	63	0.022	B	1210	2.5	1.5	3.3	100	DEEB2220(1)A0N00	LDEEB2220(1)A0N00
100	63	0.027	C	1812	3.3	1.7	4.7	100	DEEC2270(1)A5N00	LDEEC2270(1)A5N00
100	63	0.027	B	1210	2.5	1.7	3.3	100	DEEB2270(1)A0N00	LDEEB2270(1)A0N00
100	63	0.033	C	1812	3.3	1.8	4.7	100	DEEC2330(1)A5N00	LDEEC2330(1)A5N00
100	63	0.033	B	1210	2.5	2.0	3.3	100	DEEB2330(1)A0N00	LDEEB2330(1)A0N00
100	63	0.039	C	1812	3.3	1.7	4.7	100	DEEC2390(1)A5N00	LDEEC2390(1)A5N00
100	63	0.039	B	1210	2.5	2.1	3.3	100	DEEB2390(1)A0N00	LDEEB2390(1)A0N00
100	63	0.047	C	1812	3.3	1.7	4.7	100	DEEC2470(1)A5N00	LDEEC2470(1)A5N00
100	63	0.047	B	1210	2.5	2.1	3.3	100	DEEB2470(1)A0N00	LDEEB2470(1)A0N00
100	63	0.056	C	1812	3.3	1.7	4.7	100	DEEC2560(1)A5N00	LDEEC2560(1)A5N00
100	63	0.068	C	1812	3.3	1.8	4.7	100	DEEC2680(1)A5N00	LDEEC2680(1)A5N00
100	63	0.082	C	1812	3.3	2.1	4.7	100	DEEC2820(1)A5N00	LDEEC2820(1)A5N00
100	63	0.1	C	1812	3.3	2.4	4.7	100	DEEC3100(1)A5N00	LDEEC3100(1)A5N00
100	63	0.12	D	2220	5.0	1.9	6.0	100	DEED3120(1)A5N00	LDEED3120(1)A5N00
100	63	0.15	D	2220	5.0	1.9	6.0	100	DEED3150(1)A5N00	LDEED3150(1)A5N00
100	63	0.18	D	2220	5.0	2.0	6.0	100	DEED3180(1)A5N00	LDEED3180(1)A5N00
100	63	0.22	D	2220	5.0	2.4	6.0	100	DEED3220(1)A5N00	LDEED3220(1)A5N00
100	63	0.27	D	2220	5.0	2.8	6.0	100	DEED3270(1)A5N00	LDEED3270(1)A5N00
100	63	0.33	D	2220	5.0	3.3	6.0	100	DEED3330(1)A5N00	LDEED3330(1)A5N00
100	63	0.39	E	2824	6.1	2.6	7.3	100	DEEE3390(1)A5N00	LDEEE3390(1)A5N00
100	63	0.39	D	2220	5.0	3.7	6.0	100	DEED3390(1)A0N00	LDEED3390(1)A0N00
100	63	0.47	E	2824	6.1	3.0	7.3	100	DEEE3470(1)A5N00	LDEEE3470(1)A5N00
100	63	0.47	D	2220	5.0	4.4	6.0	100	DEED3470(1)A0N00	LDEED3470(1)A0N00
100	63	0.56	E	2824	6.1	3.5	7.3	100	DEEE3560(1)A5N00	LDEEE3560(1)A5N00
100	63	0.68	E	2824	6.1	4.1	7.3	100	DEEE3680(1)A5N00	LDEEE3680(1)A5N00
100	63	0.82	F	4030	7.9	2.8	10.5	100	DEEF3820(1)A5N00	LDEEF3820(1)A5N00
100	63	0.82	E	2824	6.1	4.9	7.3	100	DEEE3820(1)A0N00	LDEEE3820(1)A0N00
100	63	1.0	F	4030	7.9	3.2	10.5	100	DEEF4100(1)A5N00	LDEEF4100(1)A5N00
100	63	1.0	E	2824	6.1	5.4	7.3	100	DEEE4100(2)A0N00	LDEEE4100(2)A0N00
100	63	1.2	G	5040	10.4	3.1	13.0	100	DEEG4120(1)A5N00	LDEEG4120(1)A5N00
100	63	1.2	F	4030	7.9	3.7	10.5	100	DEEF4120(1)A0N00	LDEEF4120(1)A0N00
100	63	1.5	G	5040	10.4	3.1	13.0	100	DEEG4150(1)A5N00	LDEEG4150(1)A5N00
100	63	1.5	F	4030	7.9	4.5	10.5	100	DEEF4150(1)A0N00	LDEEF4150(1)A0N00
100	63	1.8	G	5040	10.4	3.4	13.0	100	DEEG4180(1)A5N00	LDEEG4180(1)A5N00
100	63	1.8	F	4030	7.9	5.4	10.5	100	DEEF4180(1)A0N00	LDEEF4180(1)A0N00
100	63	2.2	G	5040	10.4	4.1	13.0	100	DEEG4220(1)A5N00	LDEEG4220(1)A5N00
100	63	2.2	F	4030	7.9	5.6	10.5	100	DEEF4220(2)A0N00	LDEEF4220(2)A0N00
100	63	2.7	H	6054	13.7	3.3	15.5	100	DEEH4270(1)A5N00	LDEEH4270(1)A5N00
100	63	2.7	G	5040	10.4	4.9	13.0	100	DEEG4270(1)A0N00	LDEEG4270(1)A0N00
100	63	3.3	H	6054	13.7	3.9	15.5	100	DEEH4330(1)A5N00	LDEEH4330(1)A5N00
100	63	3.3	G	5040	10.4	5.7	13.0	100	DEEG4330(1)A0N00	LDEEG4330(1)A0N00
100	63	3.9	H	6054	13.7	4.5	15.5	100	DEEH4390(1)A5N00	LDEEH4390(1)A5N00
100	63	4.7	H	6054	13.7	5.3	15.5	100	DEEH4470(1)A5N00	LDEEH4470(1)A5N00
250	120	0.001	A	1206	1.7	1.1	3.3	100	DEIA1100(1)A0N00	LDEIA1100(1)A0N00
250	120	0.0012	A	1206	1.7	1.1	3.3	100	DEIA1120(1)A0N00	LDEIA1120(1)A0N00
250	120	0.0015	C	1812	3.3	1.7	4.7	100	DEIC1150(1)A5N00	LDEIC1150(1)A5N00
250	120	0.0015	A	1206	1.7	1.1	3.3	100	DEIA1150(1)A0N00	LDEIA1150(1)A0N00
250	120	0.0018	C	1812	3.3	1.7	4.7	100	DEIC1180(1)A5N00	LDEIC1180(1)A5N00
250	120	0.0018	A	1206	1.7	1.1	3.3	100	DEIA1180(1)A0N00	LDEIA1180(1)A0N00
VDC	**VAC**	**Capacitace Value (µF)**	**Size Code**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, J = ±5% on request.
(2) Only K and M tolerances available.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code	Chip Size	Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
					B	H	L			
250	120	0.0022	C	1812	3.3	1.7	4.7	100	DEIC1220(1)A5N00	LDEIC1220(1)A5N00
250	120	0.0022	A	1206	1.7	1.1	3.3	100	DEIA1220(1)A0N00	LDEIA1220(1)A0N00
250	120	0.0027	C	1812	3.3	1.8	4.7	100	DEIC1270(1)A5N00	LDEIC1270(1)A5N00
250	120	0.0027	A	1206	1.7	1.1	3.3	100	DEIA1270(1)A0N00	LDEIA1270(1)A0N00
250	120	0.0033	C	1812	3.3	1.7	4.7	100	DEIC1330(1)A5N00	LDEIC1330(1)A5N00
250	120	0.0033	A	1206	1.7	1.2	3.3	100	DEIA1330(1)A0N00	LDEIA1330(1)A0N00
250	120	0.0039	C	1812	3.3	1.7	4.7	100	DEIC1390(1)A5N00	LDEIC1390(1)A5N00
250	120	0.0039	B	1210	2.5	1.6	3.3	100	DEIB1390(1)A0N00	LDEIB1390(1)A0N00
250	120	0.0047	C	1812	3.3	1.8	4.7	100	DEIC1470(1)A5N00	LDEIC1470(1)A5N00
250	120	0.0047	B	1210	2.5	1.6	3.3	100	DEIB1470(1)A0N00	LDEIB1470(1)A0N00
250	120	0.0056	C	1812	3.3	1.7	4.7	100	DEIC1560(1)A5N00	LDEIC1560(1)A5N00
250	120	0.0056	B	1210	2.5	1.6	3.3	100	DEIB1560(1)A0N00	LDEIB1560(1)A0N00
250	120	0.0068	C	1812	3.3	1.7	4.7	100	DEIC1680(1)A5N00	LDEIC1680(1)A5N00
250	120	0.0068	B	1210	2.5	1.8	3.3	100	DEIB1680(1)A0N00	LDEIB1680(1)A0N00
250	120	0.0082	C	1812	3.3	1.8	4.7	100	DEIC1820(1)A5N00	LDEIC1820(1)A5N00
250	120	0.0082	B	1210	2.5	2.0	3.3	100	DEIB1820(1)A0N00	LDEIB1820(1)A0N00
250	120	0.01	C	1812	3.3	1.7	4.7	100	DEIC2100(1)A5N00	LDEIC2100(1)A5N00
250	120	0.01	B	1210	2.5	2.1	3.3	100	DEIB2100(1)A0N00	LDEIB2100(1)A0N00
250	120	0.012	C	1812	3.3	1.7	4.7	100	DEIC2120(1)A5N00	LDEIC2120(1)A5N00
250	120	0.015	C	1812	3.3	1.7	4.7	100	DEIC2150(1)A5N00	LDEIC2150(1)A5N00
250	120	0.018	D	2220	5.0	2.2	6.0	100	DEID2180(1)A5N00	LDEID2180(1)A5N00
250	120	0.018	C	1812	3.3	1.8	4.7	100	DEIC2180(1)A0N00	LDEIC2180(1)A0N00
250	120	0.022	D	2220	5.0	2.5	6.0	100	DEID2220(1)A5N00	LDEID2220(1)A5N00
250	120	0.022	C	1812	3.3	2.2	4.7	100	DEIC2220(1)A0N00	LDEIC2220(1)A0N00
250	120	0.027	D	2220	5.0	2.9	6.0	100	DEID2270(1)A5N00	LDEID2270(1)A5N00
250	120	0.027	C	1812	3.3	2.5	4.7	100	DEIC2270(1)A0N00	LDEIC2270(1)A0N00
250	120	0.033	D	2220	5.0	1.9	6.0	100	DEID2330(1)A5N00	LDEID2330(1)A5N00
250	120	0.033	C	1812	3.3	2.6	4.7	100	DEIC2330(1)A0N00	LDEIC2330(1)A0N00
250	120	0.039	D	2220	5.0	2.1	6.0	100	DEID2390(1)A5N00	LDEID2390(1)A5N00
250	120	0.047	D	2220	5.0	2.3	6.0	100	DEID2470(1)A5N00	LDEID2470(1)A5N00
250	120	0.056	D	2220	5.0	2.6	6.0	100	DEID2560(1)A5N00	LDEID2560(1)A5N00
250	120	0.068	D	2220	5.0	2.8	6.0	100	DEID2680(1)A5N00	LDEID2680(1)A5N00
250	120	0.082	E	2824	6.1	2.6	7.3	100	DEIE2820(1)A5N00	LDEIE2820(1)A5N00
250	120	0.082	D	2220	5.0	3.5	6.0	100	DEID2820(1)A0N00	LDEID2820(1)A0N00
250	120	0.1	E	2824	6.1	2.9	7.3	100	DEIE3100(1)A5N00	LDEIE3100(1)A5N00
250	120	0.1	D	2220	5.0	4.1	6.0	100	DEID3100(1)A0N00	LDEID3100(1)A0N00
250	120	0.12	E	2824	6.1	3.3	7.3	100	DEIE3120(1)A5N00	LDEIE3120(1)A5N00
250	120	0.12	D	2220	5.0	4.4	6.0	100	DEID3120(1)A0N00	LDEID3120(1)A0N00
250	120	0.15	E	2824	6.1	3.8	7.3	100	DEIE3150(1)A5N00	LDEIE3150(1)A5N00
250	120	0.18	F	4030	7.9	2.7	10.5	100	DEIF3180(1)A5N00	LDEIF3180(1)A5N00
250	120	0.18	E	2824	6.1	4.4	7.3	100	DEIE3180(1)A0N00	LDEIE3180(1)A0N00
250	120	0.22	F	4030	7.9	3.1	10.5	100	DEIF3220(1)A5N00	LDEIF3220(1)A5N00
250	120	0.22	E	2824	6.1	5.2	7.3	100	DEIE3220(1)A0N00	LDEIE3220(1)A0N00
250	120	0.27	F	4030	7.9	3.7	10.5	100	DEIF3270(1)A5N00	LDEIF3270(1)A5N00
250	120	0.33	F	4030	7.9	4.3	10.5	100	DEIF3330(1)A5N00	LDEIF3330(1)A5N00
250	120	0.39	G	5040	10.4	3.3	13.0	100	DEIG3390(1)A5N00	LDEIG3390(1)A5N00
250	120	0.39	F	4030	7.9	5.0	10.5	100	DEIF3390(1)A0N00	LDEIF3390(1)A0N00
250	120	0.47	G	5040	10.4	3.8	13.0	100	DEIG3470(1)A5N00	LDEIG3470(1)A5N00
250	120	0.47	F	4030	7.9	5.5	10.5	100	DEIF3470(1)A0N00	LDEIF3470(1)A0N00
250	120	0.56	G	5040	10.4	4.4	13.0	100	DEIG3560(1)A5N00	LDEIG3560(1)A5N00
250	120	0.56	F	4030	7.9	5.5	10.5	100	DEIF3560(1)A0N00	LDEIF3560(1)A0N00
250	120	0.68	H	6054	13.7	3.4	15.5	100	DEIH3680(1)A5N00	LDEIH3680(1)A5N00
250	120	0.68	G	5040	10.4	5.2	13.0	100	DEIG3680(1)A0N00	LDEIG3680(1)A0N00
250	120	0.82	H	6054	13.7	3.9	15.5	100	DEIH3820(1)A5N00	LDEIH3820(1)A5N00
250	120	0.82	G	5040	10.4	5.7	13.0	100	DEIG3820(1)A0N00	LDEIG3820(1)A0N00
250	120	1.0	H	6054	13.7	4.6	15.5	100	DEIH4100(1)A5N00	LDEIH4100(1)A5N00
250	120	1.2	H	6054	13.7	5.4	15.5	100	DEIH4120(1)A0N00	LDEIH4120(1)A0N00
250	120	1.5	H	6054	13.7	5.7	15.5	100	DEIH4150(1)A0N00	LDEIH4150(1)A0N00
400	160	0.015	D	2220	5.0	2.1	6.0	100	DEMD2150(1)A5N00	LDEMD2150(1)A5N00
VDC	**VAC**	**Capacitace Value (µF)**	**Size Code**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, J = ±5% on request.
(2) Only K and M tolerances available.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code	Chip Size	Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
					B	H	L			
400	160	0.018	D	2220	5.0	2.2	6.0	100	DEMD2180(1)A5N00	LDEMD2180(1)A5N00
400	160	0.022	D	2220	5.0	2.5	6.0	100	DEMD2220(1)A5N00	LDEMD2220(1)A5N00
400	160	0.027	D	2220	5.0	2.9	6.0	100	DEMD2270(1)A5N00	LDEMD2270(1)A5N00
400	160	0.033	D	2220	5.0	3.4	6.0	100	DEMD2330(1)A5N00	LDEMD2330(1)A5N00
400	160	0.039	D	2220	5.0	3.8	6.0	100	DEMD2390(1)A5N00	LDEMD2390(1)A5N00
400	160	0.047	D	2220	5.0	4.4	6.0	100	DEMD2470(1)A5N00	LDEMD2470(1)A5N00
400	160	0.056	E	2824	6.1	3.5	7.3	100	DEME2560(1)A5N00	LDEME2560(1)A5N00
400	160	0.068	E	2824	6.1	4.1	7.3	100	DEME2680(1)A5N00	LDEME2680(1)A5N00
400	160	0.082	E	2824	6.1	4.7	7.3	100	DEME2820(1)A5N00	LDEME2820(1)A5N00
400	160	0.1	E	2824	6.1	5.4	7.3	100	DEME3100(1)A5N00	LDEME3100(1)A5N00
400	160	0.12	F	4030	7.9	3.6	10.5	100	DEMF3120(1)A5N00	LDEMF3120(1)A5N00
400	160	0.15	F	4030	7.9	4.4	10.5	100	DEMF3150(1)A5N00	LDEMF3150(1)A5N00
400	160	0.18	F	4030	7.9	5.1	10.5	100	DEMF3180(1)A5N00	LDEMF3180(1)A5N00
400	160	0.22	G	5040	10.4	3.8	13.0	100	DEMG3220(1)A5N00	LDEMG3220(1)A5N00
400	160	0.27	G	5040	10.4	4.7	13.0	100	DEMG3270(1)A5N00	LDEMG3270(1)A5N00
400	160	0.33	G	5040	10.4	5.6	13.0	100	DEMG3330(1)A5N00	LDEMG3330(1)A5N00
400	160	0.39	H	6054	13.7	4.2	15.5	100	DEMH3390(1)A5N00	LDEMH3390(1)A5N00
400	160	0.47	H	6054	13.7	5.3	15.5	100	DEMH3470(1)A5N00	LDEMH3470(1)A5N00
630	200	0.001	D	2220	5.0	1.9	6.0	100	DEPD1100(1)A5N00	LDEPD1100(1)A5N00
630	200	0.0012	D	2220	5.0	2.0	6.0	100	DEPD1120(1)A5N00	LDEPD1120(1)A5N00
630	200	0.0015	D	2220	5.0	2.3	6.0	100	DEPD1150(1)A5N00	LDEPD1150(1)A5N00
630	200	0.0018	D	2220	5.0	2.5	6.0	100	DEPD1180(1)A5N00	LDEPD1180(1)A5N00
630	200	0.0022	D	2220	5.0	2.0	6.0	100	DEPD1220(1)A5N00	LDEPD1220(1)A5N00
630	200	0.0027	D	2220	5.0	2.3	6.0	100	DEPD1270(1)A5N00	LDEPD1270(1)A5N00
630	200	0.0033	D	2220	5.0	2.6	6.0	100	DEPD1330(1)A5N00	LDEPD1330(1)A5N00
630	200	0.0039	D	2220	5.0	1.9	6.0	100	DEPD1390(1)A5N00	LDEPD1390(1)A5N00
630	200	0.0047	D	2220	5.0	2.0	6.0	100	DEPD1470(1)A5N00	LDEPD1470(1)A5N00
630	200	0.0056	D	2220	5.0	2.0	6.0	100	DEPD1560(1)A5N00	LDEPD1560(1)A5N00
630	200	0.0068	D	2220	5.0	2.3	6.0	100	DEPD1680(1)A5N00	LDEPD1680(1)A5N00
630	200	0.0082	D	2220	5.0	2.6	6.0	100	DEPD1820(1)A5N00	LDEPD1820(1)A5N00
630	200	0.010	D	2220	5.0	3.0	6.0	100	DEPD2100(1)A5N00	LDEPD2100(1)A5N00
630	200	0.012	D	2220	5.0	3.4	6.0	100	DEPD2120(1)A5N00	LDEPD2120(1)A5N00
630	200	0.015	D	2220	5.0	4.0	6.0	100	DEPD2150(1)A5N00	LDEPD2150(1)A5N00
630	200	0.018	D	2220	5.0	4.4	6.0	100	DEPD2180(1)A5N00	LDEPD2180(1)A5N00
630	200	0.022	E	2824	6.1	3.4	7.3	100	DEPE2220(1)A5N00	LDEPE2220(1)A5N00
630	200	0.027	E	2824	6.1	4.0	7.3	100	DEPE2270(1)A5N00	LDEPE2270(1)A5N00
630	200	0.033	E	2824	6.1	4.7	7.3	100	DEPE2330(1)A5N00	LDEPE2330(1)A5N00
630	200	0.039	E	2824	6.1	5.3	7.3	100	DEPE2390(1)A5N00	LDEPE2390(1)A5N00
630	200	0.047	F	4030	7.9	3.4	10.5	100	DEPF2470(1)A5N00	LDEPF2470(1)A5N00
630	200	0.056	F	4030	7.9	3.9	10.5	100	DEPF2560(1)A5N00	LDEPF2560(1)A5N00
630	200	0.068	F	4030	7.9	4.5	10.5	100	DEPF2680(1)A5N00	LDEPF2680(1)A5N00
630	200	0.082	F	4030	7.9	5.4	10.5	100	DEPF2820(1)A5N00	LDEPF2820(1)A5N00
630	200	0.1	G	5040	10.4	3.9	13.0	100	DEPG3100(1)A5N00	LDEPG3100(1)A5N00
630	200	0.1	F	4030	7.9	5.5	10.5	100	DEPF3100(2)A0N00	LDEPF3100(2)A0N00
630	200	0.12	G	5040	10.4	4.4	13.0	100	DEPG3120(1)A5N00	LDEPG3120(1)A5N00
630	200	0.15	G	5040	10.4	5.3	13.0	100	DEPG3150(1)A5N00	LDEPG3150(1)A5N00
630	200	0.18	H	6054	13.7	4.2	15.5	100	DEPH3180(1)A5N00	LDEPH3180(1)A5N00
630	200	0.22	H	6054	13.7	4.9	15.5	100	DEPH3220(1)A5N00	LDEPH3220(1)A5N00
630	200	0.27	H	6054	13.7	5.7	15.5	100	DEPH3270(2)A5N00	LDEPH3270(2)A5N00
1000	250	0.001	D	2220	5.0	1.9	6.0	300	DEQD1100(1)A5N00	LDEQD1100(1)A5N00
1000	250	0.0012	D	2220	5.0	2.0	6.0	300	DEQD1120(1)A5N00	LDEQD1120(1)A5N00
1000	250	0.0015	D	2220	5.0	2.3	6.0	300	DEQD1150(1)A5N00	LDEQD1150(1)A5N00
1000	250	0.0018	D	2220	5.0	2.5	6.0	300	DEQD1180(1)A5N00	LDEQD1180(1)A5N00
1000	250	0.0022	D	2220	5.0	2.0	6.0	300	DEQD1220(1)A5N00	LDEQD1220(1)A5N00
1000	250	0.0027	D	2220	5.0	2.3	6.0	300	DEQD1270(1)A5N00	LDEQD1270(1)A5N00
1000	250	0.0033	D	2220	5.0	2.6	6.0	300	DEQD1330(1)A5N00	LDEQD1330(1)A5N00
1000	250	0.0039	D	2220	5.0	3.0	6.0	300	DEQD1390(1)A5N00	LDEQD1390(1)A5N00
1000	250	0.0047	D	2220	5.0	3.4	6.0	300	DEQD1470(1)A5N00	LDEQD1470(1)A5N00
1000	250	0.0056	D	2220	5.0	3.9	6.0	300	DEQD1560(1)A5N00	LDEQD1560(1)A5N00
VDC	VAC	Capacitace Value (µF)	Size Code	Chip Size	B (mm)	H (mm)	L (mm)	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) K = ±10%, M = ±20%, J = ±5% on request.
(2) Only K and M tolerances available.

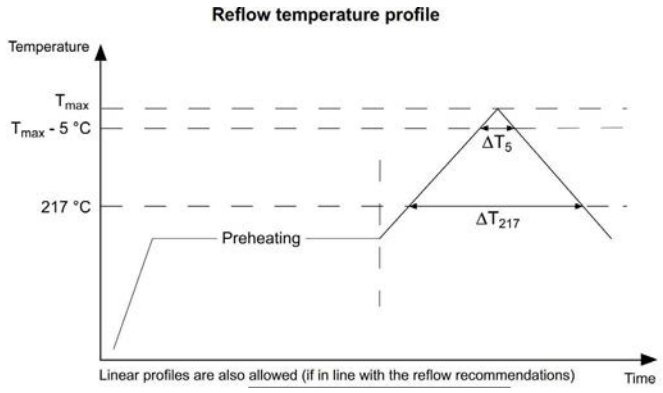
Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code	Chip Size	Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
					B	H	L			
1000	250	0.0068	D	2220	5.0	4.4	6.0	300	DEQD1680(1)A5N00	LDEQD1680(1)A5N00
1000	250	0.0082	E	2824	6.1	2.9	7.3	300	DEQE1820(1)A5N00	LDEQE1820(1)A5N00
1000	250	0.010	E	2824	6.1	3.4	7.3	300	DEQE2100(1)A5N00	LDEQE2100(1)A5N00
1000	250	0.012	E	2824	6.1	4.0	7.3	300	DEQE2120(1)A5N00	LDEQE2120(1)A5N00
1000	250	0.015	E	2824	6.1	4.9	7.3	300	DEQE2150(1)A5N00	LDEQE2150(1)A5N00
1000	250	0.018	E	2824	6.1	5.4	7.3	300	DEQE2180(1)A5N00	LDEQE2180(1)A5N00
1000	250	0.022	F	4030	7.9	3.4	10.5	300	DEQF2220(1)A5N00	LDEQF2220(1)A5N00
1000	250	0.027	F	4030	7.9	4.1	10.5	300	DEQF2270(1)A5N00	LDEQF2270(1)A5N00
1000	250	0.033	F	4030	7.9	4.9	10.5	300	DEQF2330(1)A5N00	LDEQF2330(1)A5N00
1000	250	0.039	G	5040	10.4	3.5	13.0	300	DEQG2390(1)A5N00	LDEQG2390(1)A5N00
1000	250	0.047	G	5040	10.4	4.1	13.0	300	DEQG2470(1)A5N00	LDEQG2470(1)A5N00
1000	250	0.056	G	5040	10.4	4.7	13.0	300	DEQG2560(1)A5N00	LDEQG2560(1)A5N00
1000	250	0.068	G	5040	10.4	5.5	13.0	300	DEQG2680(1)A5N00	LDEQG2680(1)A5N00
1000	250	0.082	H	6054	13.7	4.2	15.5	300	DEQH2820(1)A5N00	LDEQH2820(1)A5N00
1000	250	0.1	H	6054	13.7	4.8	15.5	300	DEQH3100(1)A5N00	LDEQH3100(1)A5N00
VDC	**VAC**	**Capacitace Value (µF)**	**Size Code**	**Chip Size**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, J = ±5% on request.
(2) Only K and M tolerances available.

Soldering Process

Reflow Recommendations	
Preheating	
Maximum Preheating Time	180 seconds
Minimum Temperature	150°C
Maximum Temperature	200°C
Maximum Time within T_{max} and T_{max} – 5°C (ΔT_5)	30 seconds ($T_{max} \leq 250°C$)
	10 seconds (250 °C < $T_{max} \leq 255°C$)
Maximum Time Over 217°C (ΔT_{217})	150 seconds
Maximum Temperature Ramp Rate	3°C/seconds (heating)
	6°C/seconds (cooling)
Second reflow	
If two reflow processes are needed, be sure that before the second reflow, the temperature on the capacitor's surface is lower than 50°C.	



Maximum Temperature on Component Body (T_{max})

Capacitor	Capacitor Volume (mm^3)		
H_{max} (mm)	< 350	350 – 2,000	> 2,000
< 1.6	255°C *	255°C *	255°C *
1.6 – 2.5	255°C *	250°C	245°C
> 2.5	250°C	245°C	245°C

**In line with JEDEC STD 020D ed. June 2007 with some limitations.*

Flux/Cleaning/Storage and Moisture

Flux suggestions

We suggest to use a no-clean flux with a halogen content lower than 0.1%.

Cleaning suggestions

To clean the PCB assembly we suggest to use a suitable solvent like Isopropyl Alcohol, deionized water or neutral pH detergents. Solvents like Toluene, Xylene and Trichloroethylene should not be used.

Storage and moisture recommendations

KEMET SMD Film Capacitors are supplied in a MBB (Moisture Barrier Bag) Class 1. We can guarantee a 24 months shelf life (temperature ≤ 40°C/relative humidity ≤ 90%). After the MBB has been opened, components may stay in areas with controlled temperature and humidity (temperature ≤ 30°C/relative humidity ≤ 60%) for 168 hours [MSL 3] (rated voltage ≤ 100 VDC) or 696 hours [MSL 2a] (rated voltage > 100 VDC). For longer periods of time and/or higher temperature and/or higher relative humidity values, it is absolutely necessary to protect the components against humidity. If the reel inside the MBB is partially used, KEMET recommends to re-use the same MBB or to avoid areas without controlled temperature and humidity (see above). If the above conditions are not respected, components require a baking (minimum time: 48 hours at 55 ± 5°C) before the reflow.

Manual assembly recommendations

If PCBs are assembled manually, care must be taken to avoid any mechanical damage to the components. Our recommendations are the following (see Fig. 1):

1. When using tweezers, the components should be gripped across the two terminations (A);
2. Avoid any contact with the two cutting surfaces (C);
3. A vacuum pen is recommended on the top and bottom surfaces (B).

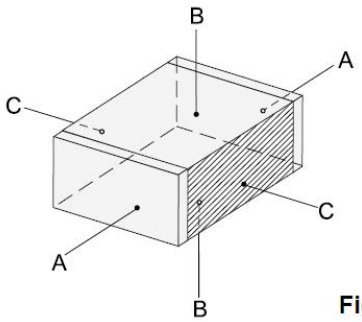


Fig. 1

Flux/Cleaning/Storage and Moisture cont'd

Manual soldering recommendations

LDE and LDB series have been designed for Surface Mount Technology, pick & place machines and reflow soldering systems. Using a manual soldering iron, issues may occur because the typical temperature for manual soldering is around 350°C. Therefore please pay careful attention:

- Never touch the capacitor body with the soldering iron but rather touch the soldering iron and the end termination with the tin wire edge (see Fig. 2);
- If the soldering iron is equipped with a temperature controller device:
  Set the temperature to 250 ± 3°C and proceed as per Fig. 2 (the maximum soldering time, on both terminations, is 5 seconds);
- If the soldering iron is NOT equipped with a temperature controller device:
  This is the worst situation. The following are a few practical suggestions but, clearly, the operator's experience is extremely important:
  1. Proceed as per Fig. 2;
  2. As soon as the tin wire starts melting, move the soldering iron away as quickly as possible;
  3. Wait a few seconds and check that the soldering joint has been properly created;
- If the soldering iron is equipped with a hot air flow device:
  Set the hot air temperature to 250 ± 3°C and do not send the hot air directly onto the capacitor plastic body. In this situation, the operator's experience is very important;
- In any case, avoid mass-mounting SMD Film Capacitors manually.

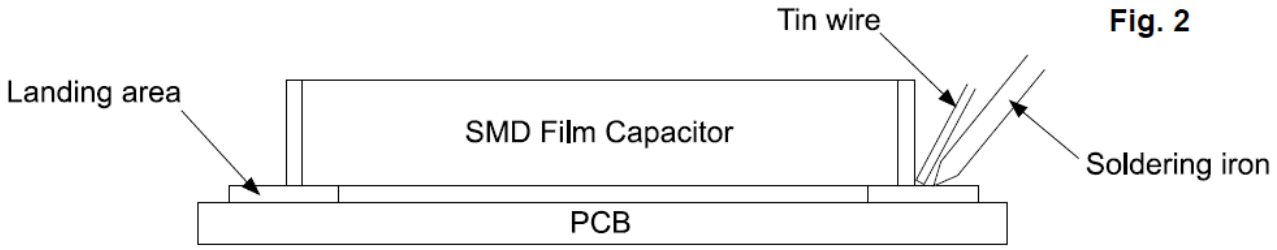


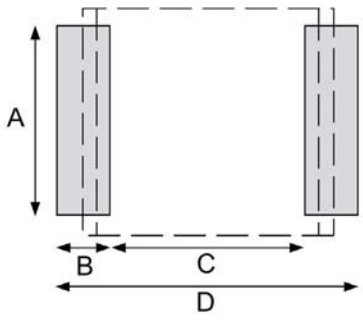
Fig. 2

Packaging Quantities

Chip Size (EIA)	Height (mm)	Reel
1206	All	3000
1210	All	2250
1812	≤ 1.9	4000
1812	2.1 – 2.6	3000
2220	≤ 2.8	3000
2220	2.9 – 3.7	2250
2220	3.8 – 4.4	1750
2824	2.6 – 3.6	2250
2824	3.8 – 4.4	1750
2824	4.7 – 5.4	1500
4030	2.7 – 3.7	1500
4030	3.9 – 4.5	1250
4030	4.7 – 5.6	1000
5040	3.1 – 3.5	1500
5040	3.8 – 4.4	1250
5040	4.7 – 5.7	1000
6054	3.3 – 4.2	1000
6054	4.5 – 4.9	750
6054	5.3 – 5.7	750

Landing

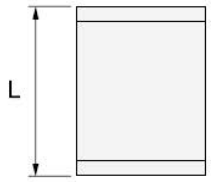
Size	Dimensions in mm			
	A	B	C	D
1206	1.5	1.1	2.3	4.5
1210	2.3	1.1	2.3	4.5
1812	3	1.7	3.1	6.5
2220	4.6	2.1	3.9	8.1
2824	5.7	2.3	5.3	9.9
4030	7.4	2.6	8.2	13.4
5040	9.6	2.6	10.7	15.9
6054	12.6	2.6	13.2	18.4



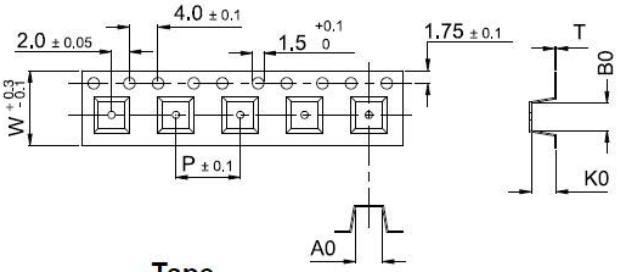
These landing area dimensions have been developed to take full advantage of the new RoHS 6 terminations design.
We suggest to use a Sn/Ag/Cu solder paste (suggested thickness: 0.10 – 0.15 mm).
If a non-lead free solder paste is used, a minimum peak temperature of 210°C on the component's body is suggested.

Carrier Taping & Packaging (IEC 60286–2)

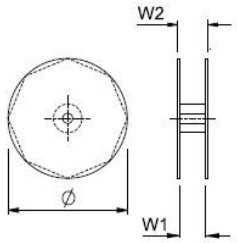
Horizontal Taping Orientation



SMD Film Capacitor (top view)



Tape



Reel

Chip Size (EIA) Horizontal Mounting	Dimensions in mm			Taping Specification							
	W	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
	Nominal	Nominal	Nominal	-0.1/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
1206	1.7	All	3.3	8	4	2	3.8	1.3	180	8	12
1210	2.5	All	3.3	8	4	3	3.8	2.1	180	8	12
1812	3.3	≤ 1.9	4.7	12	8	3.8	5.3	2	330	12	16
1812	3.3	2.1 – 2.6	4.7	12	8	3.9	5.2	2.6	330	12	16
2220	5.0	≤ 2.8	6.0	12	8	5.5	6.5	2.9	330	12	16
2220	5.0	2.9 – 3.7	6.0	12	8	5.5	6.5	3.8	330	12	16
2220	5.0	3.8 – 4.4	6.0	12	8	5.5	6.5	4.9	330	12	16
2824	6.1	2.6 – 3.6	7.3	16	8	6.6	7.9	3.8	330	16	20
2824	6.1	3.8 – 4.4	7.3	16	8	6.6	7.9	4.6	330	16	20
2824	6.1	4.7 – 5.4	7.3	16	8	6.6	7.9	5.5	330	16	20
4030	7.9	2.7 – 3.7	10.5	16	12	8.6	11	3.8	330	16	20
4030	7.9	3.9 – 4.5	10.5	16	12	8.6	11	4.6	330	16	20
4030	7.9	4.7 – 5.6	10.5	16	12	8.6	11	5.8	330	16	20
5040	10.4	3.1 – 3.5	13.0	24	12	10.9	13.5	3.8	330	24	28
5040	10.4	3.8 – 4.4	13.0	24	12	10.9	13.5	4.7	330	24	28
5040	10.4	4.7 – 5.7	13.0	24	12	11	13.5	5.9	330	24	28
6054	13.7	3.3 – 4.2	15.5	24	16	14.4	16	4.3	330	24	28
6054	13.7	4.5 – 4.9	15.5	24	16	14.4	16	5.1	330	24	28
6054	13.7	5.3 – 5.7	15.5	24	16	14.4	16	5.8	330	24	28

In accordance with IEC 60286-3
Materials:
- carrier tape: antistatic material
- cover tape: polyester + polythene
- reel: recyclable polystyrene

All parts in reels are packed in hermetically sealed Moisture Barrier Bag (MBB) Class 1.

GMC Series Encapsulated, Size 2220 – 6560, 50 – 630 VDC

Overview

Polyethylene naphthalate (PEN) film capacitor for surface mounting. Encapsulation in self-extinguishing material meeting the requirements of UL 94 V–0. GMC capacitors meet the standards according to IEC 60384-23.

Applications

Typical applications include bypassing and signal coupling. GMC is a general purpose series designed for the highest reliability and high temperature service. Not suitable for across-the-line application (see suppressor capacitors).

Benefits

- Rated voltage: 50 – 630 VDC
- Rated voltage: 30 – 300 VAC
- Capacitance range: 0.001 – 5.6 µF
- EIA size: 2220 – 6560
- Capacitance tolerance: ±5%, ±10%, other tolerances on request
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of −55˚C to +125˚C

Legacy Part Number System

GMC	5.7	102	K	50	J33	TR12
Series	Chip Length (mm)	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Size Code	Packaging
Metallized PEN	5.7 7.3 10.2 12.7 16.5	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	J = ±5% K = ±10% Other tolerances on request.	50 63 100 250 400 630	See Dimension Table	See Ordering Options Table

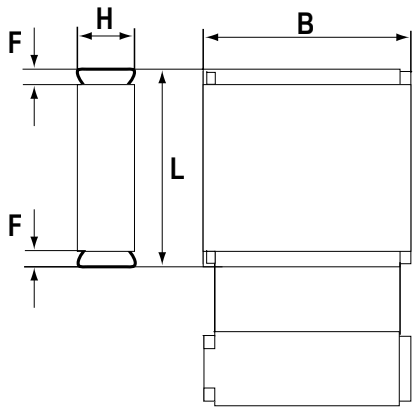
New KEMET Part Number System

F	115	P	P	102	K	050	V
Capacitor Class	Series	Chip Size	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging
F = Film	Metallized PEN	P = 2220 S = 2824 W = 4036 Y = 5045 Z = 6560	See Dimension Table	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	J = ±5% K = ±10% Other tolerances on request.	050 = 50 063 = 63 100 = 100 250 = 250 400 = 400 630 = 630	See Ordering Options Table

Ordering Options Table

Chip Size (EIA)	Packaging Type	KEMET Packaging Code	Legacy Packaging Code
2220	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR12
	Bulk (Bag)	A	BULK
2824	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR12
	Bulk (Bag)	A	BULK
4036	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR16
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
5045	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
6560	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV44

Dimensions – Millimeters



KEMET Size Code	Legacy Size Code	Chip Size (EIA)	B		H		L		F	
			Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
PP	J33	2220	5.0	+/-0.2	3.0	+/-0.2	5.7	+/-0.2	0.5	Nominal
PU	J35	2220	5.0	+/-0.2	4.0	+/-0.2	5.7	+/-0.2	0.5	Nominal
SL	K33	2824	6.0	+/-0.2	3.0	+/-0.2	7.3	+/-0.2	0.5	Nominal
SP	K35	2824	6.0	+/-0.2	3.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
ST	K37	2824	6.0	+/-0.2	4.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
WP	A31	4036	9.1	+/-0.2	5.5	+/-0.2	10.2	+/-0.2	0.5	Nominal
YR	B31	5045	11.5	+/-0.2	6.5	+/-0.2	12.7	+/-0.2	0.5	Nominal
ZS	C31	6560	15	+/-0.2	7.0	+/-0.2	16.5	+/-0.2	0.5	Nominal

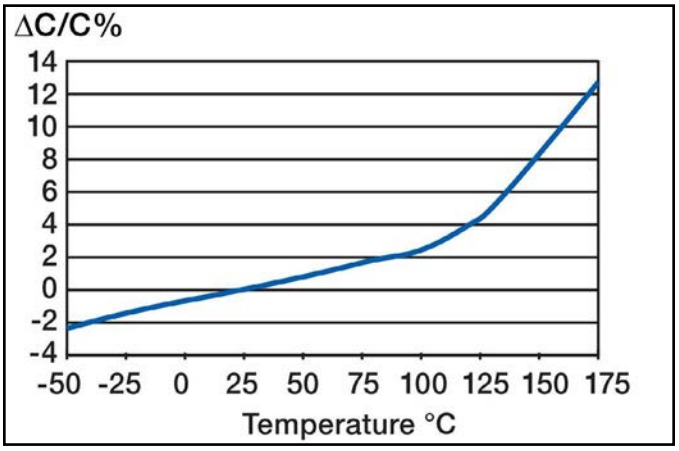
Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

Performance Characteristics

Rated Voltage (VDC)	50	63	100	250	400	630
Rated Voltage (VAC)	30	40	63	160	200	300
Capacitance Range (µF)	0.001 – 5.6	0.001 – 4.7	0.001 – 2.2	0.001 – 0.68	0.001 – 0.33	0.022-0.15
Chip Size (EIA)	2220 – 6560					
Capacitance Tolerance	±5%, ±10%, other tolerances on request					
Category Temperature Range	−55°C to +125°C					
Rated Temperature	+100°C					
Voltage Derating	The rated voltage should be decreased with 1.25%/°C from +100°C to +125°C and 1.5%/°C from +125°C to 175°C					
Climatic Category	55/125/56					
Test Voltage	1.6 x V_R, 60 seconds					
Insulation Resistance	Measured at +20°C According to IEC 60384–19					
	Minimum Value Between Terminals					
			C ≤ 0.33 µF		C > 0.33 µF	
	V_R ≤ 100		10,000 MΩ		3,000 MΩ • µF	
	V_R > 100		30,000 MΩ		10,000 MΩ • µF	
Dissipation Factor	Maximum Values at +23°C					
		C ≤ 0.1 µF	0.1 < C ≤ 1 µF		C > 1 µF	
	1 kHz	0.6%	0.6%		0.6%	
	10 kHz	1.0%	1.0%		1.0%	
	100 kHz	2.0%	2.5%			
Pulse Rise Time	The capacitors can withstand an unlimited number of pulses with a dV/dt according to Table 1. For voltages (V) lower than the rated voltage (V_R), the specified dV/dt can be multiplied by V_R/V.					

Capacitance vs. Temperature



Dissipation Factor vs. Temperature

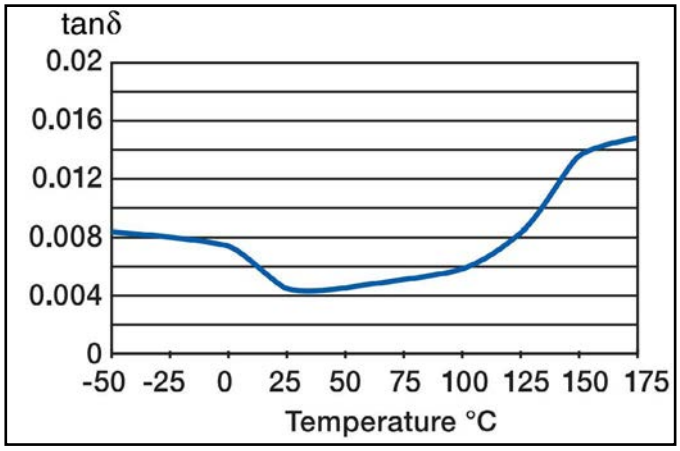


Table 1 – Ratings & Part Number Reference

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	0.0010	PP/J33	5.0	3.0	5.7	2220	40	F115PP102(1)050(2)	GMC5.7102(1)50J33(2)
50	30	0.0012	PP/J33	5.0	3.0	5.7	2220	40	F115PP122(1)050(2)	GMC5.7122(1)50J33(2)
50	30	0.0015	PP/J33	5.0	3.0	5.7	2220	40	F115PP152(1)050(2)	GMC5.7152(1)50J33(2)
50	30	0.0018	PP/J33	5.0	3.0	5.7	2220	40	F115PP182(1)050(2)	GMC5.7182(1)50J33(2)
50	30	0.0022	PP/J33	5.0	3.0	5.7	2220	40	F115PP222(1)050(2)	GMC5.7222(1)50J33(2)
50	30	0.0027	PP/J33	5.0	3.0	5.7	2220	40	F115PP272(1)050(2)	GMC5.7272(1)50J33(2)
50	30	0.0033	PP/J33	5.0	3.0	5.7	2220	40	F115PP332(1)050(2)	GMC5.7332(1)50J33(2)
50	30	0.0039	PP/J33	5.0	3.0	5.7	2220	40	F115PP392(1)050(2)	GMC5.7392(1)50J33(2)
50	30	0.0047	PP/J33	5.0	3.0	5.7	2220	40	F115PP472(1)050(2)	GMC5.7472(1)50J33(2)
50	30	0.0056	PP/J33	5.0	3.0	5.7	2220	40	F115PP562(1)050(2)	GMC5.7562(1)50J33(2)
50	30	0.0068	PP/J33	5.0	3.0	5.7	2220	40	F115PP682(1)050(2)	GMC5.7682(1)50J33(2)
50	30	0.0082	PP/J33	5.0	3.0	5.7	2220	40	F115PP822(1)050(2)	GMC5.7822(1)50J33(2)
50	30	0.010	PP/J33	5.0	3.0	5.7	2220	40	F115PP103(1)050(2)	GMC5.7103(1)50J33(2)
50	30	0.012	PP/J33	5.0	3.0	5.7	2220	40	F115PP123(1)050(2)	GMC5.7123(1)50J33(2)
50	30	0.015	PP/J33	5.0	3.0	5.7	2220	30	F115PP153(1)050(2)	GMC5.7153(1)50J33(2)
50	30	0.018	PP/J33	5.0	3.0	5.7	2220	30	F115PP183(1)050(2)	GMC5.7183(1)50J33(2)
50	30	0.022	PP/J33	5.0	3.0	5.7	2220	30	F115PP223(1)050(2)	GMC5.7223(1)50J33(2)
50	30	0.027	PP/J33	5.0	3.0	5.7	2220	30	F115PP273(1)050(2)	GMC5.7273(1)50J33(2)
50	30	0.033	PP/J33	5.0	3.0	5.7	2220	20	F115PP333(1)050(2)	GMC5.7333(1)50J33(2)
50	30	0.039	PP/J33	5.0	3.0	5.7	2220	20	F115PP393(1)050(2)	GMC5.7393(1)50J33(2)
50	30	0.047	PP/J33	5.0	3.0	5.7	2220	20	F115PP473(1)050(2)	GMC5.7473(1)50J33(2)
50	30	0.056	PP/J33	5.0	3.0	5.7	2220	20	F115PP563(1)050(2)	GMC5.7563(1)50J33(2)
50	30	0.068	PP/J33	5.0	3.0	5.7	2220	20	F115PP683(1)050(2)	GMC5.7683(1)50J33(2)
50	30	0.082	PP/J33	5.0	3.0	5.7	2220	20	F115PP823(1)050(2)	GMC5.7823(1)50J33(2)
50	30	0.10	PP/J33	5.0	3.0	5.7	2220	20	F115PP104(1)050(2)	GMC5.7104(1)50J33(2)
50	30	0.12	PP/J33	5.0	3.0	5.7	2220	20	F115PP124(1)050(2)	GMC5.7124(1)50J33(2)
50	30	0.15	PU/J35	5.0	4.0	5.7	2220	20	F115PU154(1)050(2)	GMC5.7154(1)50J35(2)
50	30	0.18	PU/J35	5.0	4.0	5.7	2220	20	F115PU184(1)050(2)	GMC5.7184(1)50J35(2)
50	30	0.022	WP/A31	9.1	5.5	10.2	4036	40	F115WP223(1)050(2)	GMC10.2223(1)50A31(2)
50	30	0.027	WP/A31	9.1	5.5	10.2	4036	40	F115WP273(1)050(2)	GMC10.2273(1)50A31(2)
50	30	0.033	WP/A31	9.1	5.5	10.2	4036	40	F115WP333(1)050(2)	GMC10.2333(1)50A31(2)
50	30	0.039	WP/A31	9.1	5.5	10.2	4036	40	F115WP393(1)050(2)	GMC10.2393(1)50A31(2)
50	30	0.047	WP/A31	9.1	5.5	10.2	4036	30	F115WP473(1)050(2)	GMC10.2473(1)50A31(2)
50	30	0.056	WP/A31	9.1	5.5	10.2	4036	30	F115WP563(1)050(2)	GMC10.2563(1)50A31(2)
50	30	0.068	WP/A31	9.1	5.5	10.2	4036	30	F115WP683(1)050(2)	GMC10.2683(1)50A31(2)
50	30	0.082	WP/A31	9.1	5.5	10.2	4036	30	F115WP823(1)050(2)	GMC10.2823(1)50A31(2)
50	30	0.10	WP/A31	9.1	5.5	10.2	4036	30	F115WP104(1)050(2)	GMC10.2104(1)50A31(2)
50	30	0.12	WP/A31	9.1	5.5	10.2	4036	30	F115WP124(1)050(2)	GMC10.2124(1)50A31(2)
50	30	0.15	WP/A31	9.1	5.5	10.2	4036	20	F115WP154(1)050(2)	GMC10.2154(1)50A31(2)
50	30	0.18	WP/A31	9.1	5.5	10.2	4036	20	F115WP184(1)050(2)	GMC10.2184(1)50A31(2)
50	30	0.22	WP/A31	9.1	5.5	10.2	4036	20	F115WP224(1)050(2)	GMC10.2224(1)50A31(2)
50	30	0.27	WP/A31	9.1	5.5	10.2	4036	20	F115WP274(1)050(2)	GMC10.2274(1)50A31(2)
50	30	0.33	WP/A31	9.1	5.5	10.2	4036	20	F115WP334(1)050(2)	GMC10.2334(1)50A31(2)
50	30	0.39	WP/A31	9.1	5.5	10.2	4036	10	F115WP394(1)050(2)	GMC10.2394(1)50A31(2)
50	30	0.47	WP/A31	9.1	5.5	10.2	4036	10	F115WP474(1)050(2)	GMC10.2474(1)50A31(2)
50	30	0.56	WP/A31	9.1	5.5	10.2	4036	10	F115WP564(1)050(2)	GMC10.2564(1)50A31(2)
50	30	0.68	WP/A31	9.1	5.5	10.2	4036	10	F115WP684(1)050(2)	GMC10.2684(1)50A31(2)
50	30	0.82	WP/A31	9.1	5.5	10.2	4036	10	F115WP824(1)050(2)	GMC10.2824(1)50A31(2)
50	30	1.0	WP/A31	9.1	5.5	10.2	4036	10	F115WP105(1)050(2)	GMC10.2105(1)50A31(2)
50	30	1.2	WP/A31	9.1	5.5	10.2	4036	10	F115WP125(1)050(2)	GMC10.2125(1)50A31(2)
50	30	1.5	YR/B31	11.5	6.5	12.7	5045	8	F115YR155(1)050(2)	GMC12.7155(1)50B31(2)
50	30	1.8	YR/B31	11.5	6.5	12.7	5045	8	F115YR185(1)050(2)	GMC12.7185(1)50B31(2)
50	30	2.2	YR/B31	11.5	6.5	12.7	5045	8	F115YR225(1)050(2)	GMC12.7225(1)50B31(2)
50	30	2.7	YR/B31	11.5	6.5	12.7	5045	8	F115YR275(1)050(2)	GMC12.7275(1)50B31(2)
50	30	3.0	YR/B31	11.5	6.5	12.7	5045	8	F115YR305(1)050(2)	GMC12.7305(1)50B31(2)
50	30	3.9	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS395(1)050(2)	GMC16.5395(1)50C31(2)
50	30	4.7	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS475(1)050(2)	GMC16.5475(1)50C31(2)
50	30	5.6	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS565(1)050(2)	GMC16.5565(1)50C31(2)
63	40	0.0010	SL/K33	6.0	3.0	7.3	2824	50	F115SL102(1)063(2)	GMC7.3102(1)63K33(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
63	40	0.0012	SL/K33	6.0	3.0	7.3	2824	50	F115SL122(1)063(2)	GMC7.3122(1)63K33(2)
63	40	0.0015	SL/K33	6.0	3.0	7.3	2824	50	F115SL152(1)063(2)	GMC7.3152(1)63K33(2)
63	40	0.0018	SL/K33	6.0	3.0	7.3	2824	50	F115SL182(1)063(2)	GMC7.3182(1)63K33(2)
63	40	0.0022	SL/K33	6.0	3.0	7.3	2824	50	F115SL222(1)063(2)	GMC7.3222(1)63K33(2)
63	40	0.0027	SL/K33	6.0	3.0	7.3	2824	50	F115SL272(1)063(2)	GMC7.3272(1)63K33(2)
63	40	0.0033	SL/K33	6.0	3.0	7.3	2824	50	F115SL332(1)063(2)	GMC7.3332(1)63K33(2)
63	40	0.0039	SL/K33	6.0	3.0	7.3	2824	50	F115SL392(1)063(2)	GMC7.3392(1)63K33(2)
63	40	0.0047	SL/K33	6.0	3.0	7.3	2824	50	F115SL472(1)063(2)	GMC7.3472(1)63K33(2)
63	40	0.0056	SL/K33	6.0	3.0	7.3	2824	50	F115SL562(1)063(2)	GMC7.3562(1)63K33(2)
63	40	0.0068	SL/K33	6.0	3.0	7.3	2824	40	F115SL682(1)063(2)	GMC7.3682(1)63K33(2)
63	40	0.0082	SL/K33	6.0	3.0	7.3	2824	40	F115SL822(1)063(2)	GMC7.3822(1)63K33(2)
63	40	0.010	SL/K33	6.0	3.0	7.3	2824	40	F115SL103(1)063(2)	GMC7.3103(1)63K33(2)
63	40	0.012	SL/K33	6.0	3.0	7.3	2824	40	F115SL123(1)063(2)	GMC7.3123(1)63K33(2)
63	40	0.015	SL/K33	6.0	3.0	7.3	2824	40	F115SL153(1)063(2)	GMC7.3153(1)63K33(2)
63	40	0.018	SL/K33	6.0	3.0	7.3	2824	40	F115SL183(1)063(2)	GMC7.3183(1)63K33(2)
63	40	0.022	SL/K33	6.0	3.0	7.3	2824	30	F115SL223(1)063(2)	GMC7.3223(1)63K33(2)
63	40	0.027	SL/K33	6.0	3.0	7.3	2824	30	F115SL273(1)063(2)	GMC7.3273(1)63K33(2)
63	40	0.033	SL/K33	6.0	3.0	7.3	2824	30	F115SL333(1)063(2)	GMC7.3333(1)63K33(2)
63	40	0.039	SL/K33	6.0	3.0	7.3	2824	30	F115SL393(1)063(2)	GMC7.3393(1)63K33(2)
63	40	0.047	SL/K33	6.0	3.0	7.3	2824	30	F115SL473(1)063(2)	GMC7.3473(1)63K33(2)
63	40	0.056	SL/K33	6.0	3.0	7.3	2824	30	F115SL563(1)063(2)	GMC7.3563(1)63K33(2)
63	40	0.068	SL/K33	6.0	3.0	7.3	2824	20	F115SL683(1)063(2)	GMC7.3683(1)63K33(2)
63	40	0.082	SL/K33	6.0	3.0	7.3	2824	20	F115SL823(1)063(2)	GMC7.3823(1)63K33(2)
63	40	0.10	SL/K33	6.0	3.0	7.3	2824	20	F115SL104(1)063(2)	GMC7.3104(1)63K33(2)
63	40	0.12	SL/K33	6.0	3.0	7.3	2824	20	F115SL124(1)063(2)	GMC7.3124(1)63K33(2)
63	40	0.15	SL/K33	6.0	3.0	7.3	2824	20	F115SL154(1)063(2)	GMC7.3154(1)63K33(2)
63	40	0.18	SL/K33	6.0	3.0	7.3	2824	20	F115SL184(1)063(2)	GMC7.3184(1)63K33(2)
63	40	0.22	SL/K33	6.0	3.0	7.3	2824	20	F115SL224(1)063(2)	GMC7.3224(1)63K33(2)
63	40	0.27	SP/K35	6.0	3.5	7.3	2824	20	F115SP274(1)063(2)	GMC7.3274(1)63K35(2)
63	40	0.33	SP/K35	6.0	3.5	7.3	2824	20	F115SP334(1)063(2)	GMC7.3334(1)63K35(2)
63	40	0.39	ST/K37	6.0	4.5	7.3	2824	20	F115ST394(1)063(2)	GMC7.3394(1)63K37(2)
63	40	0.022	WP/A31	9.1	5.5	10.2	4036	40	F115WP223(1)063(2)	GMC10.2223(1)63A31(2)
63	40	0.027	WP/A31	9.1	5.5	10.2	4036	40	F115WP273(1)063(2)	GMC10.2273(1)63A31(2)
63	40	0.033	WP/A31	9.1	5.5	10.2	4036	40	F115WP333(1)063(2)	GMC10.2333(1)63A31(2)
63	40	0.039	WP/A31	9.1	5.5	10.2	4036	40	F115WP393(1)063(2)	GMC10.2393(1)63A31(2)
63	40	0.047	WP/A31	9.1	5.5	10.2	4036	30	F115WP473(1)063(2)	GMC10.2473(1)63A31(2)
63	40	0.056	WP/A31	9.1	5.5	10.2	4036	30	F115WP563(1)063(2)	GMC10.2563(1)63A31(2)
63	40	0.068	WP/A31	9.1	5.5	10.2	4036	30	F115WP683(1)063(2)	GMC10.2683(1)63A31(2)
63	40	0.082	WP/A31	9.1	5.5	10.2	4036	30	F115WP823(1)063(2)	GMC10.2823(1)63A31(2)
63	40	0.10	WP/A31	9.1	5.5	10.2	4036	30	F115WP104(1)063(2)	GMC10.2104(1)63A31(2)
63	40	0.12	WP/A31	9.1	5.5	10.2	4036	30	F115WP124(1)063(2)	GMC10.2124(1)63A31(2)
63	40	0.15	WP/A31	9.1	5.5	10.2	4036	20	F115WP154(1)063(2)	GMC10.2154(1)63A31(2)
63	40	0.18	WP/A31	9.1	5.5	10.2	4036	20	F115WP184(1)063(2)	GMC10.2184(1)63A31(2)
63	40	0.22	WP/A31	9.1	5.5	10.2	4036	20	F115WP224(1)063(2)	GMC10.2224(1)63A31(2)
63	40	0.27	WP/A31	9.1	5.5	10.2	4036	20	F115WP274(1)063(2)	GMC10.2274(1)63A31(2)
63	40	0.33	WP/A31	9.1	5.5	10.2	4036	20	F115WP334(1)063(2)	GMC10.2334(1)63A31(2)
63	40	0.39	WP/A31	9.1	5.5	10.2	4036	10	F115WP394(1)063(2)	GMC10.2394(1)63A31(2)
63	40	0.47	WP/A31	9.1	5.5	10.2	4036	10	F115WP474(1)063(2)	GMC10.2474(1)63A31(2)
63	40	0.56	WP/A31	9.1	5.5	10.2	4036	10	F115WP564(1)063(2)	GMC10.2564(1)63A31(2)
63	40	0.68	WP/A31	9.1	5.5	10.2	4036	10	F115WP684(1)063(2)	GMC10.2684(1)63A31(2)
63	40	0.82	WP/A31	9.1	5.5	10.2	4036	10	F115WP824(1)063(2)	GMC10.2824(1)63A31(2)
63	40	1.0	YR/B31	11.5	6.5	12.7	5045	8	F115YR105(1)063(2)	GMC12.7105(1)63B31(2)
63	40	1.2	YR/B31	11.5	6.5	12.7	5045	8	F115YR125(1)063(2)	GMC12.7125(1)63B31(2)
63	40	1.5	YR/B31	11.5	6.5	12.7	5045	8	F115YR155(1)063(2)	GMC12.7155(1)63B31(2)
63	40	1.8	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS185(1)063(2)	GMC16.5185(1)63C31(2)
63	40	2.2	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS225(1)063(2)	GMC16.5225(1)63C31(2)
63	40	2.7	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS275(1)063(2)	GMC16.5275(1)63C31(2)
63	40	3.3	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS335(1)063(2)	GMC16.5335(1)63C31(2)
63	40	3.9	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS395(1)063(2)	GMC16.5395(1)63C31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
63	40	4.7	ZS/C31	15.0	7.0	16.5	6560	5	F115ZS475(1)063(2)	GMC16.5475(1)63C31(2)
100	63	0.0010	PP/J33	5.0	3.0	5.7	2220	40	F115PP102(1)100(2)	GMC5.7102(1)100J33(2)
100	63	0.0012	PP/J33	5.0	3.0	5.7	2220	40	F115PP122(1)100(2)	GMC5.7122(1)100J33(2)
100	63	0.0015	PP/J33	5.0	3.0	5.7	2220	40	F115PP152(1)100(2)	GMC5.7152(1)100J33(2)
100	63	0.0018	PP/J33	5.0	3.0	5.7	2220	40	F115PP182(1)100(2)	GMC5.7182(1)100J33(2)
100	63	0.0022	PP/J33	5.0	3.0	5.7	2220	40	F115PP222(1)100(2)	GMC5.7222(1)100J33(2)
100	63	0.0027	PP/J33	5.0	3.0	5.7	2220	40	F115PP272(1)100(2)	GMC5.7272(1)100J33(2)
100	63	0.0033	PP/J33	5.0	3.0	5.7	2220	40	F115PP332(1)100(2)	GMC5.7332(1)100J33(2)
100	63	0.0039	PP/J33	5.0	3.0	5.7	2220	40	F115PP392(1)100(2)	GMC5.7392(1)100J33(2)
100	63	0.0047	PP/J33	5.0	3.0	5.7	2220	40	F115PP472(1)100(2)	GMC5.7472(1)100J33(2)
100	63	0.0056	PP/J33	5.0	3.0	5.7	2220	40	F115PP562(1)100(2)	GMC5.7562(1)100J33(2)
100	63	0.0068	PP/J33	5.0	3.0	5.7	2220	40	F115PP682(1)100(2)	GMC5.7682(1)100J33(2)
100	63	0.0082	PP/J33	5.0	3.0	5.7	2220	40	F115PP822(1)100(2)	GMC5.7822(1)100J33(2)
100	63	0.010	PP/J33	5.0	3.0	5.7	2220	40	F115PP103(1)100(2)	GMC5.7103(1)100J33(2)
100	63	0.012	PP/J33	5.0	3.0	5.7	2220	40	F115PP123(1)100(2)	GMC5.7123(1)100J33(2)
100	63	0.015	PP/J33	5.0	3.0	5.7	2220	30	F115PP153(1)100(2)	GMC5.7153(1)100J33(2)
100	63	0.018	PP/J33	5.0	3.0	5.7	2220	30	F115PP183(1)100(2)	GMC5.7183(1)100J33(2)
100	63	0.022	PP/J33	5.0	3.0	5.7	2220	30	F115PP223(1)100(2)	GMC5.7223(1)100J33(2)
100	63	0.027	PP/J33	5.0	3.0	5.7	2220	30	F115PP273(1)100(2)	GMC5.7273(1)100J33(2)
100	63	0.033	PP/J33	5.0	3.0	5.7	2220	30	F115PP333(1)100(2)	GMC5.7333(1)100J33(2)
100	63	0.039	PU/J35	5.0	4.0	5.7	2220	30	F115PU393(1)100(2)	GMC5.7393(1)100J35(2)
100	63	0.047	PU/J35	5.0	4.0	5.7	2220	30	F115PU473(1)100(2)	GMC5.7473(1)100J35(2)
100	63	0.0010	SL/K33	6.0	3.0	7.3	2824	50	F115SL102(1)100(2)	GMC7.3102(1)100K33(2)
100	63	0.0012	SL/K33	6.0	3.0	7.3	2824	50	F115SL122(1)100(2)	GMC7.3122(1)100K33(2)
100	63	0.0015	SL/K33	6.0	3.0	7.3	2824	50	F115SL152(1)100(2)	GMC7.3152(1)100K33(2)
100	63	0.0018	SL/K33	6.0	3.0	7.3	2824	50	F115SL182(1)100(2)	GMC7.3182(1)100K33(2)
100	63	0.0022	SL/K33	6.0	3.0	7.3	2824	50	F115SL222(1)100(2)	GMC7.3222(1)100K33(2)
100	63	0.0027	SL/K33	6.0	3.0	7.3	2824	50	F115SL272(1)100(2)	GMC7.3272(1)100K33(2)
100	63	0.0033	SL/K33	6.0	3.0	7.3	2824	50	F115SL332(1)100(2)	GMC7.3332(1)100K33(2)
100	63	0.0039	SL/K33	6.0	3.0	7.3	2824	50	F115SL392(1)100(2)	GMC7.3392(1)100K33(2)
100	63	0.0047	SL/K33	6.0	3.0	7.3	2824	50	F115SL472(1)100(2)	GMC7.3472(1)100K33(2)
100	63	0.0056	SL/K33	6.0	3.0	7.3	2824	50	F115SL562(1)100(2)	GMC7.3562(1)100K33(2)
100	63	0.0068	SL/K33	6.0	3.0	7.3	2824	40	F115SL682(1)100(2)	GMC7.3682(1)100K33(2)
100	63	0.0082	SL/K33	6.0	3.0	7.3	2824	40	F115SL822(1)100(2)	GMC7.3822(1)100K33(2)
100	63	0.010	SL/K33	6.0	3.0	7.3	2824	40	F115SL103(1)100(2)	GMC7.3103(1)100K33(2)
100	63	0.012	SL/K33	6.0	3.0	7.3	2824	40	F115SL123(1)100(2)	GMC7.3123(1)100K33(2)
100	63	0.015	SL/K33	6.0	3.0	7.3	2824	40	F115SL153(1)100(2)	GMC7.3153(1)100K33(2)
100	63	0.018	SL/K33	6.0	3.0	7.3	2824	40	F115SL183(1)100(2)	GMC7.3183(1)100K33(2)
100	63	0.022	SL/K33	6.0	3.0	7.3	2824	30	F115SL223(1)100(2)	GMC7.3223(1)100K33(2)
100	63	0.027	SL/K33	6.0	3.0	7.3	2824	30	F115SL273(1)100(2)	GMC7.3273(1)100K33(2)
100	63	0.033	SL/K33	6.0	3.0	7.3	2824	30	F115SL333(1)100(2)	GMC7.3333(1)100K33(2)
100	63	0.039	SL/K33	6.0	3.0	7.3	2824	30	F115SL393(1)100(2)	GMC7.3393(1)100K33(2)
100	63	0.047	SL/K33	6.0	3.0	7.3	2824	30	F115SL473(1)100(2)	GMC7.3473(1)100K33(2)
100	63	0.056	SL/K33	6.0	3.0	7.3	2824	30	F115SL563(1)100(2)	GMC7.3563(1)100K33(2)
100	63	0.068	SP/K35	6.0	3.5	7.3	2824	30	F115SP683(1)100(2)	GMC7.3683(1)100K35(2)
100	63	0.082	SP/K35	6.0	3.5	7.3	2824	30	F115SP823(1)100(2)	GMC7.3823(1)100K35(2)
100	63	0.10	ST/K37	6.0	4.5	7.3	2824	30	F115ST104(1)100(2)	GMC7.3104(1)100K37(2)
100	63	0.022	WP/A31	9.1	5.5	10.2	4036	40	F115WP223(1)100(2)	GMC10.2223(1)100A31(2)
100	63	0.027	WP/A31	9.1	5.5	10.2	4036	40	F115WP273(1)100(2)	GMC10.2273(1)100A31(2)
100	63	0.033	WP/A31	9.1	5.5	10.2	4036	40	F115WP333(1)100(2)	GMC10.2333(1)100A31(2)
100	63	0.039	WP/A31	9.1	5.5	10.2	4036	40	F115WP393(1)100(2)	GMC10.2393(1)100A31(2)
100	63	0.047	WP/A31	9.1	5.5	10.2	4036	30	F115WP473(1)100(2)	GMC10.2473(1)100A31(2)
100	63	0.056	WP/A31	9.1	5.5	10.2	4036	30	F115WP563(1)100(2)	GMC10.2563(1)100A31(2)
100	63	0.068	WP/A31	9.1	5.5	10.2	4036	30	F115WP683(1)100(2)	GMC10.2683(1)100A31(2)
100	63	0.082	WP/A31	9.1	5.5	10.2	4036	30	F115WP823(1)100(2)	GMC10.2823(1)100A31(2)
100	63	0.10	WP/A31	9.1	5.5	10.2	4036	30	F115WP104(1)100(2)	GMC10.2104(1)100A31(2)
100	63	0.12	WP/A31	9.1	5.5	10.2	4036	30	F115WP124(1)100(2)	GMC10.2124(1)100A31(2)
100	63	0.15	WP/A31	9.1	5.5	10.2	4036	20	F115WP154(1)100(2)	GMC10.2154(1)100A31(2)
100	63	0.18	WP/A31	9.1	5.5	10.2	4036	20	F115WP184(1)100(2)	GMC10.2184(1)100A31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
100	63	0.22	WP/A31	9.1	5.5	10.2	4036	20	F115WP224(1)100(2)	GMC10.2224(1)100A31(2)
100	63	0.27	WP/A31	9.1	5.5	10.2	4036	20	F115WP274(1)100(2)	GMC10.2274(1)100A31(2)
100	63	0.33	WP/A31	9.1	5.5	10.2	4036	20	F115WP334(1)100(2)	GMC10.2334(1)100A31(2)
100	63	0.39	YR/B31	11.5	6.5	12.7	5045	12	F115YR394(1)100(2)	GMC12.7394(1)100B31(2)
100	63	0.47	YR/B31	11.5	6.5	12.7	5045	12	F115YR474(1)100(2)	GMC12.7474(1)100B31(2)
100	63	0.56	YR/B31	11.5	6.5	12.7	5045	12	F115YR564(1)100(2)	GMC12.7564(1)100B31(2)
100	63	0.68	YR/B31	11.5	6.5	12.7	5045	12	F115YR684(1)100(2)	GMC12.7684(1)100B31(2)
100	63	0.82	ZS/C31	15.0	7.0	16.5	6560	8	F115ZS824(1)100(2)	GMC16.5824(1)100C31(2)
100	63	1.0	ZS/C31	15.0	7.0	16.5	6560	8	F115ZS105(1)100(2)	GMC16.5105(1)100C31(2)
100	63	1.2	ZS/C31	15.0	7.0	16.5	6560	8	F115ZS125(1)100(2)	GMC16.5125(1)100C31(2)
100	63	1.5	ZS/C31	15.0	7.0	16.5	6560	8	F115ZS155(1)100(2)	GMC16.5155(1)100C31(2)
100	63	1.8	ZS/C31	15.0	7.0	16.5	6560	8	F115ZS185(1)100(2)	GMC16.5185(1)100C31(2)
100	63	2.2	ZS/C31	15.0	7.0	16.5	6560	8	F115ZS225(1)100(2)	GMC16.5225(1)100C31(2)
250	160	0.0010	PP/J33	5.0	3.0	5.7	2220	40	F115PP102(1)250(2)	GMC5.7102(1)250J33(2)
250	160	0.0012	PP/J33	5.0	3.0	5.7	2220	40	F115PP122(1)250(2)	GMC5.7122(1)250J33(2)
250	160	0.0015	PP/J33	5.0	3.0	5.7	2220	40	F115PP152(1)250(2)	GMC5.7152(1)250J33(2)
250	160	0.0018	PP/J33	5.0	3.0	5.7	2220	40	F115PP182(1)250(2)	GMC5.7182(1)250J33(2)
250	160	0.0022	PP/J33	5.0	3.0	5.7	2220	40	F115PP222(1)250(2)	GMC5.7222(1)250J33(2)
250	160	0.0027	PP/J33	5.0	3.0	5.7	2220	40	F115PP272(1)250(2)	GMC5.7272(1)250J33(2)
250	160	0.0033	PP/J33	5.0	3.0	5.7	2220	40	F115PP332(1)250(2)	GMC5.7332(1)250J33(2)
250	160	0.0039	PP/J33	5.0	3.0	5.7	2220	40	F115PP392(1)250(2)	GMC5.7392(1)250J33(2)
250	160	0.0047	PP/J33	5.0	3.0	5.7	2220	40	F115PP472(1)250(2)	GMC5.7472(1)250J33(2)
250	160	0.0056	PP/J33	5.0	3.0	5.7	2220	40	F115PP562(1)250(2)	GMC5.7562(1)250J33(2)
250	160	0.0068	PP/J33	5.0	3.0	5.7	2220	40	F115PP682(1)250(2)	GMC5.7682(1)250J33(2)
250	160	0.0082	PP/J33	5.0	3.0	5.7	2220	40	F115PP822(1)250(2)	GMC5.7822(1)250J33(2)
250	160	0.010	PP/J33	5.0	3.0	5.7	2220	40	F115PP103(1)250(2)	GMC5.7103(1)250J33(2)
250	160	0.012	PP/J33	5.0	3.0	5.7	2220	40	F115PP123(1)250(2)	GMC5.7123(1)250J33(2)
250	160	0.015	PP/J33	5.0	3.0	5.7	2220	40	F115PP153(1)250(2)	GMC5.7153(1)250J33(2)
250	160	0.018	PP/J33	5.0	3.0	5.7	2220	40	F115PP183(1)250(2)	GMC5.7183(1)250J33(2)
250	160	0.022	PU/J35	5.0	4.0	5.7	2220	40	F115PU223(1)250(2)	GMC5.7223(1)250J35(2)
250	160	0.0010	SL/K33	6.0	3.0	7.3	2824	50	F115SL102(1)250(2)	GMC7.3102(1)250K33(2)
250	160	0.0012	SL/K33	6.0	3.0	7.3	2824	50	F115SL122(1)250(2)	GMC7.3122(1)250K33(2)
250	160	0.0015	SL/K33	6.0	3.0	7.3	2824	50	F115SL152(1)250(2)	GMC7.3152(1)250K33(2)
250	160	0.0018	SL/K33	6.0	3.0	7.3	2824	50	F115SL182(1)250(2)	GMC7.3182(1)250K33(2)
250	160	0.0022	SL/K33	6.0	3.0	7.3	2824	50	F115SL222(1)250(2)	GMC7.3222(1)250K33(2)
250	160	0.0027	SL/K33	6.0	3.0	7.3	2824	50	F115SL272(1)250(2)	GMC7.3272(1)250K33(2)
250	160	0.0033	SL/K33	6.0	3.0	7.3	2824	50	F115SL332(1)250(2)	GMC7.3332(1)250K33(2)
250	160	0.0039	SL/K33	6.0	3.0	7.3	2824	50	F115SL392(1)250(2)	GMC7.3392(1)250K33(2)
250	160	0.0047	SL/K33	6.0	3.0	7.3	2824	50	F115SL472(1)250(2)	GMC7.3472(1)250K33(2)
250	160	0.0056	SL/K33	6.0	3.0	7.3	2824	50	F115SL562(1)250(2)	GMC7.3562(1)250K33(2)
250	160	0.0068	SL/K33	6.0	3.0	7.3	2824	40	F115SL682(1)250(2)	GMC7.3682(1)250K33(2)
250	160	0.0082	SL/K33	6.0	3.0	7.3	2824	40	F115SL822(1)250(2)	GMC7.3822(1)250K33(2)
250	160	0.010	SL/K33	6.0	3.0	7.3	2824	40	F115SL103(1)250(2)	GMC7.3103(1)250K33(2)
250	160	0.012	SL/K33	6.0	3.0	7.3	2824	40	F115SL123(1)250(2)	GMC7.3123(1)250K33(2)
250	160	0.015	SL/K33	6.0	3.0	7.3	2824	40	F115SL153(1)250(2)	GMC7.3153(1)250K33(2)
250	160	0.018	SL/K33	6.0	3.0	7.3	2824	40	F115SL183(1)250(2)	GMC7.3183(1)250K33(2)
250	160	0.022	SL/K33	6.0	3.0	7.3	2824	40	F115SL223(1)250(2)	GMC7.3223(1)250K33(2)
250	160	0.027	SP/K35	6.0	3.5	7.3	2824	40	F115SP273(1)250(2)	GMC7.3273(1)250K35(2)
250	160	0.033	ST/K37	6.0	4.5	7.3	2824	30	F115ST333(1)250(2)	GMC7.3333(1)250K37(2)
250	160	0.039	ST/K37	6.0	4.5	7.3	2824	30	F115ST393(1)250(2)	GMC7.3393(1)250K37(2)
250	160	0.022	WP/A31	9.1	5.5	10.2	4036	40	F115WP223(1)250(2)	GMC10.2223(1)250A31(2)
250	160	0.027	WP/A31	9.1	5.5	10.2	4036	40	F115WP273(1)250(2)	GMC10.2273(1)250A31(2)
250	160	0.033	WP/A31	9.1	5.5	10.2	4036	40	F115WP333(1)250(2)	GMC10.2333(1)250A31(2)
250	160	0.039	WP/A31	9.1	5.5	10.2	4036	40	F115WP393(1)250(2)	GMC10.2393(1)250A31(2)
250	160	0.047	WP/A31	9.1	5.5	10.2	4036	30	F115WP473(1)250(2)	GMC10.2473(1)250A31(2)
250	160	0.056	WP/A31	9.1	5.5	10.2	4036	30	F115WP563(1)250(2)	GMC10.2563(1)250A31(2)
250	160	0.068	WP/A31	9.1	5.5	10.2	4036	30	F115WP683(1)250(2)	GMC10.2683(1)250A31(2)
250	160	0.082	WP/A31	9.1	5.5	10.2	4036	30	F115WP823(1)250(2)	GMC10.2823(1)250A31(2)
250	160	0.10	WP/A31	9.1	5.5	10.2	4036	30	F115WP104(1)250(2)	GMC10.2104(1)250A31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

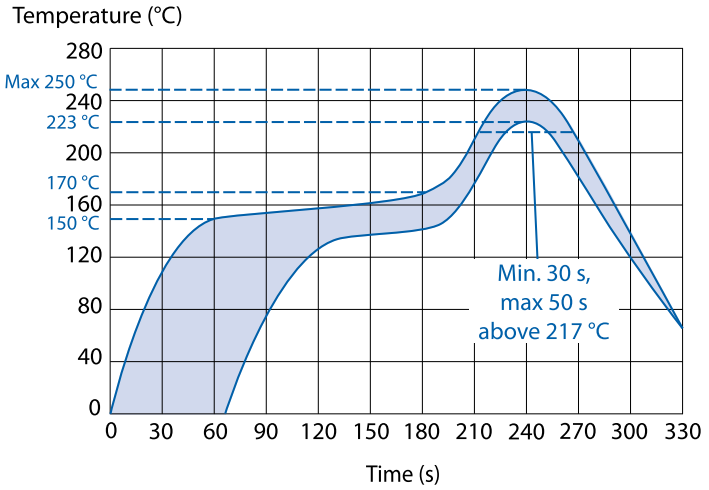
VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
250	160	0.12	WP/A31	9.1	5.5	10.2	4036	30	F115WP124(1)250(2)	GMC10.2124(1)250A31(2)
250	160	0.15	WP/A31	9.1	5.5	10.2	4036	30	F115WP154(1)250(2)	GMC10.2154(1)250A31(2)
250	160	0.18	YR/B31	11.5	6.5	12.7	5045	20	F115YR184(1)250(2)	GMC12.7184(1)250B31(2)
250	160	0.22	YR/B31	11.5	6.5	12.7	5045	20	F115YR224(1)250(2)	GMC12.7224(1)250B31(2)
250	160	0.27	YR/B31	11.5	6.5	12.7	5045	20	F115YR274(1)250(2)	GMC12.7274(1)250B31(2)
250	160	0.33	YR/B31	11.5	6.5	12.7	5045	20	F115YR334(1)250(2)	GMC12.7334(1)250B31(2)
250	160	0.39	ZS/C31	15.0	7.0	16.5	6560	12	F115ZS394(1)250(2)	GMC16.5394(1)250C31(2)
250	160	0.47	ZS/C31	15.0	7.0	16.5	6560	12	F115ZS474(1)250(2)	GMC16.5474(1)250C31(2)
250	160	0.56	ZS/C31	15.0	7.0	16.5	6560	12	F115ZS564(1)250(2)	GMC16.5564(1)250C31(2)
250	160	0.68	ZS/C31	15.0	7.0	16.5	6560	12	F115ZS684(1)250(2)	GMC16.5684(1)250C31(2)
400	200	0.0010	SL/K33	6.0	3.0	7.3	2824	50	F115SL102(1)400(2)	GMC7.3102(1)400K33(2)
400	200	0.0012	SL/K33	6.0	3.0	7.3	2824	50	F115SL122(1)400(2)	GMC7.3122(1)400K33(2)
400	200	0.0015	SL/K33	6.0	3.0	7.3	2824	50	F115SL152(1)400(2)	GMC7.3152(1)400K33(2)
400	200	0.0018	SL/K33	6.0	3.0	7.3	2824	50	F115SL182(1)400(2)	GMC7.3182(1)400K33(2)
400	200	0.0022	SL/K33	6.0	3.0	7.3	2824	50	F115SL222(1)400(2)	GMC7.3222(1)400K33(2)
400	200	0.0027	SL/K33	6.0	3.0	7.3	2824	50	F115SL272(1)400(2)	GMC7.3272(1)400K33(2)
400	200	0.0033	SL/K33	6.0	3.0	7.3	2824	50	F115SL332(1)400(2)	GMC7.3332(1)400K33(2)
400	200	0.0039	SL/K33	6.0	3.0	7.3	2824	50	F115SL392(1)400(2)	GMC7.3392(1)400K33(2)
400	200	0.0047	SL/K33	6.0	3.0	7.3	2824	50	F115SL472(1)400(2)	GMC7.3472(1)400K33(2)
400	200	0.0056	SL/K33	6.0	3.0	7.3	2824	50	F115SL562(1)400(2)	GMC7.3562(1)400K33(2)
400	200	0.0068	SL/K33	6.0	3.0	7.3	2824	50	F115SL682(1)400(2)	GMC7.3682(1)400K33(2)
400	200	0.0082	SP/K35	6.0	3.5	7.3	2824	50	F115SP822(1)400(2)	GMC7.3822(1)400K35(2)
400	200	0.010	SP/K35	6.0	3.5	7.3	2824	50	F115SP103(1)400(2)	GMC7.3103(1)400K35(2)
400	200	0.012	SP/K35	6.0	3.5	7.3	2824	50	F115SP123(1)400(2)	GMC7.3123(1)400K35(2)
400	200	0.015	ST/K37	6.0	4.5	7.3	2824	50	F115ST153(1)400(2)	GMC7.3153(1)400K37(2)
400	200	0.022	WP/A31	9.1	5.5	10.2	4036	40	F115WP223(1)400(2)	GMC10.2223(1)400A31(2)
400	200	0.027	WP/A31	9.1	5.5	10.2	4036	40	F115WP273(1)400(2)	GMC10.2273(1)400A31(2)
400	200	0.033	WP/A31	9.1	5.5	10.2	4036	40	F115WP333(1)400(2)	GMC10.2333(1)400A31(2)
400	200	0.039	WP/A31	9.1	5.5	10.2	4036	40	F115WP393(1)400(2)	GMC10.2393(1)400A31(2)
400	200	0.047	WP/A31	9.1	5.5	10.2	4036	40	F115WP473(1)400(2)	GMC10.2473(1)400A31(2)
400	200	0.056	YR/B31	11.5	6.5	12.7	5045	30	F115YR563(1)400(2)	GMC12.7563(1)400B31(2)
400	200	0.068	YR/B31	11.5	6.5	12.7	5045	30	F115YR683(1)400(2)	GMC12.7683(1)400B31(2)
400	200	0.082	YR/B31	11.5	6.5	12.7	5045	30	F115YR823(1)400(2)	GMC12.7823(1)400B31(2)
400	200	0.10	YR/B31	11.5	6.5	12.7	5045	30	F115YR104(1)400(2)	GMC12.7104(1)400B31(2)
400	200	0.12	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS124(1)400(2)	GMC16.5124(1)400C31(2)
400	200	0.15	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS154(1)400(2)	GMC16.5154(1)400C31(2)
400	200	0.18	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS184(1)400(2)	GMC16.5184(1)400C31(2)
400	200	0.22	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS224(1)400(2)	GMC16.5224(1)400C31(2)
400	200	0.27	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS274(1)400(2)	GMC16.5274(1)400C31(2)
400	200	0.33	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS334(1)400(2)	GMC16.5334(1)400C31(2)
630	300	0.022	WP/A31	9.1	5.5	10.2	4036	40	F115WP223(1)630(2)	GMC10.2223(1)630A31(2)
630	300	0.027	YR/B31	11.5	6.5	12.7	5045	30	F115YR273(1)630(2)	GMC12.7273(1)630B31(2)
630	300	0.033	YR/B31	11.5	6.5	12.7	5045	30	F115YR333(1)630(2)	GMC12.7333(1)630B31(2)
630	300	0.039	YR/B31	11.5	6.5	12.7	5045	30	F115YR393(1)630(2)	GMC12.7393(1)630B31(2)
630	300	0.047	YR/B31	11.5	6.5	12.7	5045	30	F115YR473(1)630(2)	GMC12.7473(1)630B31(2)
630	300	0.056	YR/B31	11.5	6.5	12.7	5045	30	F115YR563(1)630(2)	GMC12.7563(1)630B31(2)
630	300	0.068	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS683(1)630(2)	GMC16.5683(1)630C31(2)
630	300	0.082	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS823(1)630(2)	GMC16.5823(1)630C31(2)
630	300	0.10	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS104(1)630(2)	GMC16.5104(1)630C31(2)
630	300	0.12	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS124(1)630(2)	GMC16.5124(1)630C31(2)
630	300	0.15	ZS/C31	15.0	7.0	16.5	6560	20	F115ZS154(1)630(2)	GMC16.5154(1)630C31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) J = ±5%, K = ±10%, other tolerances on request.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Soldering Process

Reflow soldering temperature is measured on the top surface of the component. Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 250°C.



Marking

- Capacitance
- Capacitance tolerance code
- Rated voltage code
- Capacitor type G for GMC
- Manufacturing date code

Rated Voltage	Code
50 VDC	Z
63 VDC	C
100 VDC	D
250 VDC	H
400 VDC	K
630 VCD	M

Manufacturing Date Code (IEC 60062)			
Y = Year, Z = Month			
Year	**Code**	**Month**	**Code**
2000	M	January	1
2001	N	February	2
2002	P	March	3
2003	R	April	4
2004	S	May	5
2005	T	June	6
2006	U	July	7
2007	V	August	8
2008	W	September	9
2009	X	October	O
2010	A	November	N
2011	B	December	D
2012	C		
2013	D		
2014	E		
2015	F		
2016	H		
2017	J		
2018	K		
2019	L		
2020	M		

Surface Mount Polyethylene Naphthalate (PEN) Film Capacitor

GPC Series Encapsulated Double Metallized, Size 2824 – 6560, 63 – 1,000 VDC

Overview

Film capacitor for surface mounting. Double sided metallized polyethylene naphthalate (PEN) as electrode. Clear PEN as dielectric. Rugged box encapsulation in self-extinguishing material meeting the requirements of UL 94 V–0. GPC capacitors meet the standards according to IEC 60384-23.

Applications

The GPC Series is designed for high frequency coupling and decoupling as well as general high speed applications requiring high dV/dt such as pulse operation in switched-mode power supply (SMPS). Not suitable for across-the-line application (see suppressor capacitors).

Benefits

- Rated voltage: 63 – 1,000 VDC
- Rated voltage: 40 – 350 VAC
- Capacitance range: 0.00047 – 1.0 µF
- EIA size: 2824 – 6560
- Capacitance tolerance: ±10%, ±20%, other tolerances on request
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of −55˚C to +125˚C

Legacy Part Number System

GPC	7.3	471	K	63	K33	TR12
Series	Chip Length (mm)	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Size Code	Packaging
Double Metallized PEN	7.3 10.2 12.7 16.5	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	K = ±10% M = ±20% Other tolerances on request.	63 100 160 250 400 630 1,000	See Dimension Table	See Ordering Options Table

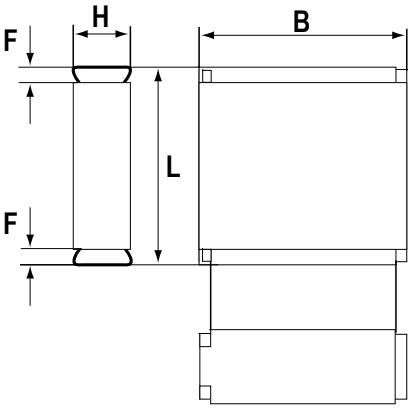
New KEMET Part Number System

F	117	S	L	471	K	063	V
Capacitor Class	Series	Chip Size	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging
F = Film	Double Metallized PEN	S = 2824 W = 4036 Y = 5045 Z = 6560	See Dimension Table	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	K = ±10% M = ±20% Other tolerances on request.	063 = 63 100 = 100 160 = 160 250 = 250 400 = 400 630 = 630 1K0 = 1,000	See Ordering Options Table

Ordering Options Table

Chip Size (EIA)	Packaging Type	KEMET Packaging Code	Legacy Packaging Code
2824	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR12
	Bulk (Bag)	A	BULK
4036	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR16
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
5045	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
6560	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV44

Dimensions – Millimeters



KEMET Size Code	Legacy Size Code	Chip Size (EIA)	B		H		L		F	
			Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
SL	K33	2824	6.0	+/-0.2	3.0	+/-0.2	7.3	+/-0.2	0.5	Nominal
SP	K35	2824	6.0	+/-0.2	3.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
ST	K37	2824	6.0	+/-0.2	4.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
WP	A31	4036	9.1	+/-0.2	5.5	+/-0.2	10.2	+/-0.2	0.5	Nominal
YR	B31	5045	11.5	+/-0.2	6.5	+/-0.2	12.7	+/-0.2	0.5	Nominal
ZS	C31	6560	15	+/-0.2	7.0	+/-0.2	16.5	+/-0.2	0.5	Nominal

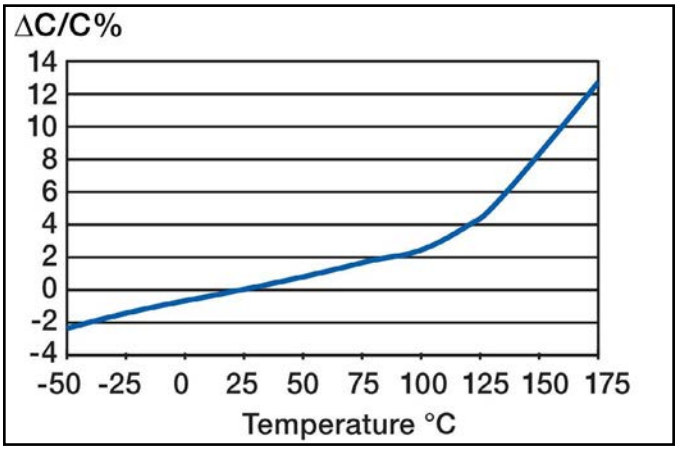
Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

Performance Characteristics

Rated Voltage (VDC)	63	100	160	250	400	630	1,000
Rated Voltage (VAC)	40	63	100	160	200	300	350
Capacitance Range (µF)	0.00047 – 1	0.00047 – 1	0.00047 – 0.68	0.00047 – 0.47	0.00047 – 0.22	0.00047 – 0.1	0.00047 – 0.68
Chip Size (EIA)	2824 – 6560						
Capacitance Tolerance	±10%, ±20%, other tolerances on request						
Category Temperature Range	−55°C to +125°C						
Rated Temperature	+100°C						
Voltage Derating	The rated voltage should be decreased with 1.25%/°C from +100°C to +125°C and 1.5%/°C from +125°C to 175°C.						
Climatic Category	55/125/56						
Test Voltage	1.6 x V_R, 60 seconds						
Insulation Resistance	Measured at +20°C According to IEC 60384–19						
	Minimum Value Between Terminals						
		C ≤ 0.33 µF	C > 0.33 µF				
	V_R ≤ 100	10,000 MΩ	5,000 MΩ • µF				
	V_R > 100	30,000 MΩ	10,000 MΩ • µF				
Dissipation Factor	Maximum Values at +23°C						
		C ≤ 0.1 µF	0.1 < C ≤ 1 µF	C > 1 µF			
	1 kHz	0.6%	0.6%	0.6%			
	10 kHz	1.0%	1.0%	1.2%			
	100 kHz	2.0%	2.5%				
Pulse Rise Time	The capacitors can withstand an unlimited number of pulses with a dV/dt according to Table 1. For voltages (V) lower than the rated voltage (V_R), the specified dV/dt can be multiplied by V_R/V.						

Capacitance vs. Temperature



Dissipation Factor vs. Temperature

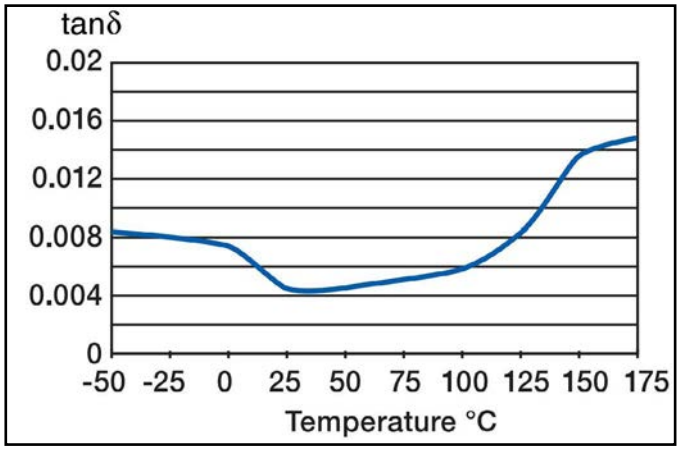


Table 1 – Ratings & Part Number Reference

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
63	40	0.00047	SL/K33	6.0	3.0	7.3	2824	400	F117SL471(1)063(2)	GPC7.3471(1)63K33(2)
63	40	0.00068	SL/K33	6.0	3.0	7.3	2824	400	F117SL681(1)063(2)	GPC7.3681(1)63K33(2)
63	40	0.0010	SL/K33	6.0	3.0	7.3	2824	400	F117SL102(1)063(2)	GPC7.3102(1)63K33(2)
63	40	0.0015	SL/K33	6.0	3.0	7.3	2824	400	F117SL152(1)063(2)	GPC7.3152(1)63K33(2)
63	40	0.0022	SL/K33	6.0	3.0	7.3	2824	400	F117SL222(1)063(2)	GPC7.3222(1)63K33(2)
63	40	0.0033	SL/K33	6.0	3.0	7.3	2824	400	F117SL332(1)063(2)	GPC7.3332(1)63K33(2)
63	40	0.0047	SL/K33	6.0	3.0	7.3	2824	400	F117SL472(1)063(2)	GPC7.3472(1)63K33(2)
63	40	0.0068	SL/K33	6.0	3.0	7.3	2824	400	F117SL682(1)063(2)	GPC7.3682(1)63K33(2)
63	40	0.010	SL/K33	6.0	3.0	7.3	2824	400	F117SL103(1)063(2)	GPC7.3103(1)63K33(2)
63	40	0.015	SL/K33	6.0	3.0	7.3	2824	400	F117SL153(1)063(2)	GPC7.3153(1)63K33(2)
63	40	0.022	SL/K33	6.0	3.0	7.3	2824	400	F117SL223(1)063(2)	GPC7.3223(1)63K33(2)
63	40	0.033	SL/K33	6.0	3.0	7.3	2824	400	F117SL333(1)063(2)	GPC7.3333(1)63K33(2)
63	40	0.047	SL/K33	6.0	3.0	7.3	2824	400	F117SL473(1)063(2)	GPC7.3473(1)63K33(2)
63	40	0.068	SP/K35	6.0	3.5	7.3	2824	400	F117SP683(1)063(2)	GPC7.3683(1)63K35(2)
63	40	0.10	ST/K37	6.0	4.5	7.3	2824	400	F117ST104(1)063(2)	GPC7.3104(1)63K37(2)
63	40	0.0068	WP/A31	9.1	5.5	10.2	4036	300	F117WP682(1)063(2)	GPC10.2682(1)63A31(2)
63	40	0.010	WP/A31	9.1	5.5	10.2	4036	300	F117WP103(1)063(2)	GPC10.2103(1)63A31(2)
63	40	0.015	WP/A31	9.1	5.5	10.2	4036	300	F117WP153(1)063(2)	GPC10.2153(1)63A31(2)
63	40	0.022	WP/A31	9.1	5.5	10.2	4036	300	F117WP223(1)063(2)	GPC10.2223(1)63A31(2)
63	40	0.027	WP/A31	9.1	5.5	10.2	4036	300	F117WP273(1)063(2)	GPC10.2273(1)63A31(2)
63	40	0.033	WP/A31	9.1	5.5	10.2	4036	300	F117WP333(1)063(2)	GPC10.2333(1)63A31(2)
63	40	0.047	WP/A31	9.1	5.5	10.2	4036	300	F117WP473(1)063(2)	GPC10.2473(1)63A31(2)
63	40	0.068	WP/A31	9.1	5.5	10.2	4036	300	F117WP683(1)063(2)	GPC10.2683(1)63A31(2)
63	40	0.10	WP/A31	9.1	5.5	10.2	4036	300	F117WP104(1)063(2)	GPC10.2104(1)63A31(2)
63	40	0.15	WP/A31	9.1	5.5	10.2	4036	300	F117WP154(1)063(2)	GPC10.2154(1)63A31(2)
63	40	0.22	WP/A31	9.1	5.5	10.2	4036	300	F117WP224(1)063(2)	GPC10.2224(1)63A31(2)
63	40	0.33	WP/A31	9.1	5.5	10.2	4036	300	F117WP334(1)063(2)	GPC10.2334(1)63A31(2)
63	40	0.47	YR/B31	11.5	6.5	12.7	5045	200	F117YR474(1)063(2)	GPC12.7474(1)63B31(2)
63	40	0.68	ZS/C31	15.0	7.0	16.5	6560	100	F117ZS684(1)063(2)	GPC16.5684(1)63C31(2)
63	40	1.0	ZS/C31	15.0	7.0	16.5	6560	100	F117ZS105(1)063(2)	GPC16.5105(1)63C31(2)
100	63	0.00047	SL/K33	6.0	3.0	7.3	2824	800	F117SL471(1)100(2)	GPC7.3471(1)100K33(2)
100	63	0.00068	SL/K33	6.0	3.0	7.3	2824	800	F117SL681(1)100(2)	GPC7.3681(1)100K33(2)
100	63	0.0010	SL/K33	6.0	3.0	7.3	2824	800	F117SL102(1)100(2)	GPC7.3102(1)100K33(2)
100	63	0.0015	SL/K33	6.0	3.0	7.3	2824	800	F117SL152(1)100(2)	GPC7.3152(1)100K33(2)
100	63	0.0022	SL/K33	6.0	3.0	7.3	2824	800	F117SL222(1)100(2)	GPC7.3222(1)100K33(2)
100	63	0.0033	SL/K33	6.0	3.0	7.3	2824	800	F117SL332(1)100(2)	GPC7.3332(1)100K33(2)
100	63	0.0047	SL/K33	6.0	3.0	7.3	2824	800	F117SL472(1)100(2)	GPC7.3472(1)100K33(2)
100	63	0.0068	SL/K33	6.0	3.0	7.3	2824	800	F117SL682(1)100(2)	GPC7.3682(1)100K33(2)
100	63	0.010	SL/K33	6.0	3.0	7.3	2824	800	F117SL103(1)100(2)	GPC7.3103(1)100K33(2)
100	63	0.015	SL/K33	6.0	3.0	7.3	2824	800	F117SL153(1)100(2)	GPC7.3153(1)100K33(2)
100	63	0.022	SL/K33	6.0	3.0	7.3	2824	800	F117SL223(1)100(2)	GPC7.3223(1)100K33(2)
100	63	0.033	SP/K35	6.0	3.5	7.3	2824	800	F117SP333(1)100(2)	GPC7.3333(1)100K35(2)
100	63	0.047	ST/K37	6.0	4.5	7.3	2824	800	F117ST473(1)100(2)	GPC7.3473(1)100K37(2)
100	63	0.0068	WP/A31	9.1	5.5	10.2	4036	600	F117WP682(1)100(2)	GPC10.2682(1)100A31(2)
100	63	0.010	WP/A31	9.1	5.5	10.2	4036	600	F117WP103(1)100(2)	GPC10.2103(1)100A31(2)
100	63	0.015	WP/A31	9.1	5.5	10.2	4036	600	F117WP153(1)100(2)	GPC10.2153(1)100A31(2)
100	63	0.022	WP/A31	9.1	5.5	10.2	4036	600	F117WP223(1)100(2)	GPC10.2223(1)100A31(2)
100	63	0.027	WP/A31	9.1	5.5	10.2	4036	600	F117WP273(1)100(2)	GPC10.2273(1)100A31(2)
100	63	0.033	WP/A31	9.1	5.5	10.2	4036	600	F117WP333(1)100(2)	GPC10.2333(1)100A31(2)
100	63	0.047	WP/A31	9.1	5.5	10.2	4036	600	F117WP473(1)100(2)	GPC10.2473(1)100A31(2)
100	63	0.068	WP/A31	9.1	5.5	10.2	4036	600	F117WP683(1)100(2)	GPC10.2683(1)100A31(2)
100	63	0.10	WP/A31	9.1	5.5	10.2	4036	600	F117WP104(1)100(2)	GPC10.2104(1)100A31(2)
100	63	0.15	WP/A31	9.1	5.5	10.2	4036	600	F117WP154(1)100(2)	GPC10.2154(1)100A31(2)
100	63	0.22	YR/B31	11.5	6.5	12.7	5045	400	F117YR224(1)100(2)	GPC12.7224(1)100B31(2)
100	63	0.33	YR/B31	11.5	6.5	12.7	5045	400	F117YR334(1)100(2)	GPC12.7334(1)100B31(2)
100	63	0.47	ZS/C31	15.0	7.0	16.5	6560	150	F117ZS474(1)100(2)	GPC16.5474(1)100C31(2)
100	63	0.68	ZS/C31	15.0	7.0	16.5	6560	150	F117ZS684(1)100(2)	GPC16.5684(1)100C31(2)
100	63	1.0	ZS/C31	15.0	7.0	16.5	6560	150	F117ZS105(1)100(2)	GPC16.5105(1)100C31(2)
160	100	0.00047	SL/K33	6.0	3.0	7.3	2824	1000	F117SL471(1)160(2)	GPC7.3471(1)160K33(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, other tolerances on request.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
160	100	0.00068	SL/K33	6.0	3.0	7.3	2824	1000	F117SL681(1)160(2)	GPC7.3681(1)160K33(2)
160	100	0.0010	SL/K33	6.0	3.0	7.3	2824	1000	F117SL102(1)160(2)	GPC7.3102(1)160K33(2)
160	100	0.0015	SL/K33	6.0	3.0	7.3	2824	1000	F117SL152(1)160(2)	GPC7.3152(1)160K33(2)
160	100	0.0022	SL/K33	6.0	3.0	7.3	2824	1000	F117SL222(1)160(2)	GPC7.3222(1)160K33(2)
160	100	0.0033	SL/K33	6.0	3.0	7.3	2824	1000	F117SL332(1)160(2)	GPC7.3332(1)160K33(2)
160	100	0.0047	SL/K33	6.0	3.0	7.3	2824	1000	F117SL472(1)160(2)	GPC7.3472(1)160K33(2)
160	100	0.0068	SL/K33	6.0	3.0	7.3	2824	1000	F117SL682(1)160(2)	GPC7.3682(1)160K33(2)
160	100	0.010	SL/K33	6.0	3.0	7.3	2824	1000	F117SL103(1)160(2)	GPC7.3103(1)160K33(2)
160	100	0.015	SL/K33	6.0	3.0	7.3	2824	1000	F117SL153(1)160(2)	GPC7.3153(1)160K33(2)
160	100	0.022	SP/K35	6.0	3.5	7.3	2824	1000	F117SP223(1)160(2)	GPC7.3223(1)160K35(2)
160	100	0.033	ST/K37	6.0	4.5	7.3	2824	1000	F117ST333(1)160(2)	GPC7.3333(1)160K37(2)
160	100	0.0068	WP/A31	9.1	5.5	10.2	4036	800	F117WP682(1)160(2)	GPC10.2682(1)160A31(2)
160	100	0.010	WP/A31	9.1	5.5	10.2	4036	800	F117WP103(1)160(2)	GPC10.2103(1)160A31(2)
160	100	0.015	WP/A31	9.1	5.5	10.2	4036	800	F117WP153(1)160(2)	GPC10.2153(1)160A31(2)
160	100	0.022	WP/A31	9.1	5.5	10.2	4036	800	F117WP223(1)160(2)	GPC10.2223(1)160A31(2)
160	100	0.027	WP/A31	9.1	5.5	10.2	4036	800	F117WP273(1)160(2)	GPC10.2273(1)160A31(2)
160	100	0.033	WP/A31	9.1	5.5	10.2	4036	800	F117WP333(1)160(2)	GPC10.2333(1)160A31(2)
160	100	0.047	WP/A31	9.1	5.5	10.2	4036	800	F117WP473(1)160(2)	GPC10.2473(1)160A31(2)
160	100	0.068	WP/A31	9.1	5.5	10.2	4036	800	F117WP683(1)160(2)	GPC10.2683(1)160A31(2)
160	100	0.10	WP/A31	9.1	5.5	10.2	4036	800	F117WP104(1)160(2)	GPC10.2104(1)160A31(2)
160	100	0.15	YR/B31	11.5	6.5	12.7	5045	600	F117YR154(1)160(2)	GPC12.7154(1)160B31(2)
160	100	0.22	YR/B31	11.5	6.5	12.7	5045	600	F117YR224(1)160(2)	GPC12.7224(1)160B31(2)
160	100	0.33	ZS/C31	15.0	7.0	16.5	6560	250	F117ZS334(1)160(2)	GPC16.5334(1)160C31(2)
160	100	0.47	ZS/C31	15.0	7.0	16.5	6560	250	F117ZS474(1)160(2)	GPC16.5474(1)160C31(2)
160	100	0.68	ZS/C31	15.0	7.0	16.5	6560	250	F117ZS684(1)160(2)	GPC16.5684(1)160C31(2)
250	160	0.00047	SL/K33	6.0	3.0	7.3	2824	1200	F117SL471(1)250(2)	GPC7.3471(1)250K33(2)
250	160	0.00068	SL/K33	6.0	3.0	7.3	2824	1200	F117SL681(1)250(2)	GPC7.3681(1)250K33(2)
250	160	0.0010	SL/K33	6.0	3.0	7.3	2824	1200	F117SL102(1)250(2)	GPC7.3102(1)250K33(2)
250	160	0.0015	SL/K33	6.0	3.0	7.3	2824	1200	F117SL152(1)250(2)	GPC7.3152(1)250K33(2)
250	160	0.0022	SL/K33	6.0	3.0	7.3	2824	1200	F117SL222(1)250(2)	GPC7.3222(1)250K33(2)
250	160	0.0033	SL/K33	6.0	3.0	7.3	2824	1200	F117SL332(1)250(2)	GPC7.3332(1)250K33(2)
250	160	0.0047	SL/K33	6.0	3.0	7.3	2824	1200	F117SL472(1)250(2)	GPC7.3472(1)250K33(2)
250	160	0.0068	SL/K33	6.0	3.0	7.3	2824	1200	F117SL682(1)250(2)	GPC7.3682(1)250K33(2)
250	160	0.010	SL/K33	6.0	3.0	7.3	2824	1200	F117SL103(1)250(2)	GPC7.3103(1)250K33(2)
250	160	0.015	SP/K35	6.0	3.5	7.3	2824	1200	F117SP153(1)250(2)	GPC7.3153(1)250K35(2)
250	160	0.022	ST/K37	6.0	4.5	7.3	2824	1200	F117ST223(1)250(2)	GPC7.3223(1)250K37(2)
250	160	0.0068	WP/A31	9.1	5.5	10.2	4036	1000	F117WP682(1)250(2)	GPC10.2682(1)250A31(2)
250	160	0.010	WP/A31	9.1	5.5	10.2	4036	1000	F117WP103(1)250(2)	GPC10.2103(1)250A31(2)
250	160	0.015	WP/A31	9.1	5.5	10.2	4036	1000	F117WP153(1)250(2)	GPC10.2153(1)250A31(2)
250	160	0.022	WP/A31	9.1	5.5	10.2	4036	1000	F117WP223(1)250(2)	GPC10.2223(1)250A31(2)
250	160	0.027	WP/A31	9.1	5.5	10.2	4036	1000	F117WP273(1)250(2)	GPC10.2273(1)250A31(2)
250	160	0.033	WP/A31	9.1	5.5	10.2	4036	1000	F117WP333(1)250(2)	GPC10.2333(1)250A31(2)
250	160	0.047	WP/A31	9.1	5.5	10.2	4036	1000	F117WP473(1)250(2)	GPC10.2473(1)250A31(2)
250	160	0.068	WP/A31	9.1	5.5	10.2	4036	1000	F117WP683(1)250(2)	GPC10.2683(1)250A31(2)
250	160	0.10	YR/B31	11.5	6.5	12.7	5045	700	F117YR104(1)250(2)	GPC12.7104(1)250B31(2)
250	160	0.15	YR/B31	11.5	6.5	12.7	5045	700	F117YR154(1)250(2)	GPC12.7154(1)250B31(2)
250	160	0.22	ZS/C31	15.0	7.0	16.5	6560	350	F117ZS224(1)250(2)	GPC16.5224(1)250C31(2)
250	160	0.33	ZS/C31	15.0	7.0	16.5	6560	350	F117ZS334(1)250(2)	GPC16.5334(1)250C31(2)
250	160	0.47	ZS/C31	15.0	7.0	16.5	6560	350	F117ZS474(1)250(2)	GPC16.5474(1)250C31(2)
400	200	0.00047	SL/K33	6.0	3.0	7.3	2824	1600	F117SL471(1)400(2)	GPC7.3471(1)400K33(2)
400	200	0.00068	SL/K33	6.0	3.0	7.3	2824	1600	F117SL681(1)400(2)	GPC7.3681(1)400K33(2)
400	200	0.0010	SL/K33	6.0	3.0	7.3	2824	1600	F117SL102(1)400(2)	GPC7.3102(1)400K33(2)
400	200	0.0015	SL/K33	6.0	3.0	7.3	2824	1600	F117SL152(1)400(2)	GPC7.3152(1)400K33(2)
400	200	0.0022	SL/K33	6.0	3.0	7.3	2824	1600	F117SL222(1)400(2)	GPC7.3222(1)400K33(2)
400	200	0.0033	SL/K33	6.0	3.0	7.3	2824	1600	F117SL332(1)400(2)	GPC7.3332(1)400K33(2)
400	200	0.0047	SL/K33	6.0	3.0	7.3	2824	1600	F117SL472(1)400(2)	GPC7.3472(1)400K33(2)
400	200	0.0068	SP/K35	6.0	3.5	7.3	2824	1600	F117SP682(1)400(2)	GPC7.3682(1)400K35(2)
400	200	0.010	ST/K37	6.0	4.5	7.3	2824	1600	F117ST103(1)400(2)	GPC7.3103(1)400K37(2)
400	200	0.0068	WP/A31	9.1	5.5	10.2	4036	1300	F117WP682(1)400(2)	GPC10.2682(1)400A31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, other tolerances on request.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

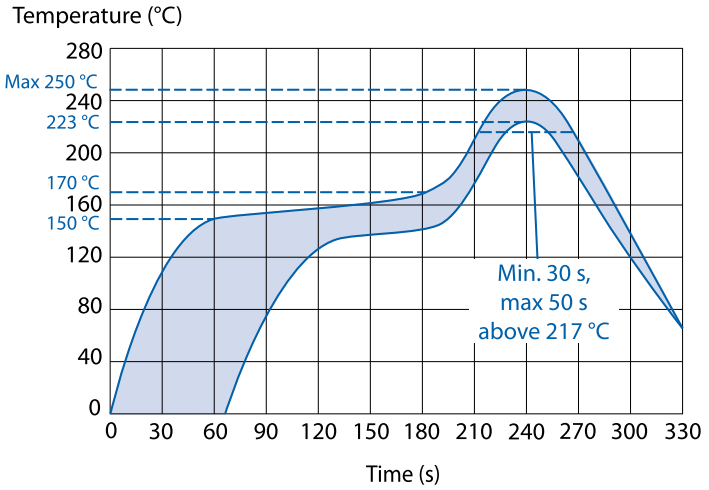
Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Cap Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
400	200	0.010	WP/A31	9.1	5.5	10.2	4036	1300	F117WP103(1)400(2)	GPC10.2103(1)400A31(2)
400	200	0.015	WP/A31	9.1	5.5	10.2	4036	1300	F117WP153(1)400(2)	GPC10.2153(1)400A31(2)
400	200	0.022	WP/A31	9.1	5.5	10.2	4036	1300	F117WP223(1)400(2)	GPC10.2223(1)400A31(2)
400	200	0.027	WP/A31	9.1	5.5	10.2	4036	1300	F117WP273(1)400(2)	GPC10.2273(1)400A31(2)
400	200	0.033	YR/B31	11.5	6.5	12.7	5045	900	F117YR333(1)400(2)	GPC12.7333(1)400B31(2)
400	200	0.047	YR/B31	11.5	6.5	12.7	5045	900	F117YR473(1)400(2)	GPC12.7473(1)400B31(2)
400	200	0.068	YR/B31	11.5	6.5	12.7	5045	900	F117YR683(1)400(2)	GPC12.7683(1)400B31(2)
400	200	0.10	ZS/C31	15.0	7.0	16.5	6560	450	F117ZS104(1)400(2)	GPC16.5104(1)400C31(2)
400	200	0.15	ZS/C31	15.0	7.0	16.5	6560	450	F117ZS154(1)400(2)	GPC16.5154(1)400C31(2)
400	200	0.22	ZS/C31	15.0	7.0	16.5	6560	450	F117ZS224(1)400(2)	GPC16.5224(1)400C31(2)
630	300	0.00047	SL/K33	6.0	3.0	7.3	2824	2000	F117SL471(1)630(2)	GPC7.3471(1)630K33(2)
630	300	0.00068	SL/K33	6.0	3.0	7.3	2824	2000	F117SL681(1)630(2)	GPC7.3681(1)630K33(2)
630	300	0.0010	SL/K33	6.0	3.0	7.3	2824	2000	F117SL102(1)630(2)	GPC7.3102(1)630K33(2)
630	300	0.0015	SL/K33	6.0	3.0	7.3	2824	2000	F117SL152(1)630(2)	GPC7.3152(1)630K33(2)
630	300	0.0022	SL/K33	6.0	3.0	7.3	2824	2000	F117SL222(1)630(2)	GPC7.3222(1)630K33(2)
630	300	0.0033	SL/K33	6.0	3.0	7.3	2824	2000	F117SL332(1)630(2)	GPC7.3332(1)630K33(2)
630	300	0.0047	SP/K35	6.0	3.5	7.3	2824	2000	F117SP472(1)630(2)	GPC7.3472(1)630K35(2)
630	300	0.0068	ST/K37	6.0	4.5	7.3	2824	2000	F117ST682(1)630(2)	GPC7.3682(1)630K37(2)
630	300	0.0068	WP/A31	9.1	5.5	10.2	4036	1600	F117WP682(1)630(2)	GPC10.2682(1)630A31(2)
630	300	0.010	WP/A31	9.1	5.5	10.2	4036	1600	F117WP103(1)630(2)	GPC10.2103(1)630A31(2)
630	300	0.015	WP/A31	9.1	5.5	10.2	4036	1600	F117WP153(1)630(2)	GPC10.2153(1)630A31(2)
630	300	0.022	WP/A31	9.1	5.5	10.2	4036	1600	F117WP223(1)630(2)	GPC10.2223(1)630A31(2)
630	300	0.033	YR/B31	11.5	6.5	12.7	5045	1100	F117YR333(1)630(2)	GPC12.7333(1)630B31(2)
630	300	0.047	YR/B31	11.5	6.5	12.7	5045	1100	F117YR473(1)630(2)	GPC12.7473(1)630B31(2)
630	300	0.068	ZS/C31	15.0	7.0	16.5	6560	550	F117ZS683(1)630(2)	GPC16.5683(1)630C31(2)
630	300	0.10	ZS/C31	15.0	7.0	16.5	6560	550	F117ZS104(1)630(2)	GPC16.5104(1)630C31(2)
1000	350	0.00047	SL/K33	6.0	3.0	7.3	2824	2200	F117SL471(1)1K0(2)	GPC7.3471(1)1000K33(2)
1000	350	0.00068	SL/K33	6.0	3.0	7.3	2824	2200	F117SL681(1)1K0(2)	GPC7.3681(1)1000K33(2)
1000	350	0.0010	SL/K33	6.0	3.0	7.3	2824	2200	F117SL102(1)1K0(2)	GPC7.3102(1)1000K33(2)
1000	350	0.0015	SL/K33	6.0	3.0	7.3	2824	2200	F117SL152(1)1K0(2)	GPC7.3152(1)1000K33(2)
1000	350	0.0022	SL/K33	6.0	3.0	7.3	2824	2200	F117SL222(1)1K0(2)	GPC7.3222(1)1000K33(2)
1000	350	0.0033	SP/K35	6.0	3.5	7.3	2824	2200	F117SP332(1)1K0(2)	GPC7.3332(1)1000K35(2)
1000	350	0.0047	ST/K37	6.0	4.5	7.3	2824	2200	F117ST472(1)1K0(2)	GPC7.3472(1)1000K37(2)
1000	350	0.0068	WP/A31	9.1	5.5	10.2	4036	1700	F117WP682(1)1K0(2)	GPC10.2682(1)1000A31(2)
1000	350	0.010	WP/A31	9.1	5.5	10.2	4036	1700	F117WP103(1)1K0(2)	GPC10.2103(1)1000A31(2)
1000	350	0.015	WP/A31	9.1	5.5	10.2	4036	1700	F117WP153(1)1K0(2)	GPC10.2153(1)1000A31(2)
1000	350	0.022	YR/B31	11.5	6.5	12.7	5045	1200	F117YR223(1)1K0(2)	GPC12.7223(1)1000B31(2)
1000	350	0.033	YR/B31	11.5	6.5	12.7	5045	1200	F117YR333(1)1K0(2)	GPC12.7333(1)1000B31(2)
1000	350	0.047	ZS/C31	15.0	7.0	16.5	6560	600	F117ZS473(1)1K0(2)	GPC16.5473(1)1000C31(2)
1000	350	0.068	ZS/C31	15.0	7.0	16.5	6560	600	F117ZS683(1)1K0(2)	GPC16.5683(1)1000C31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) K = ±10%, M = ±20%, other tolerances on request.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Soldering Process

Reflow soldering temperature is measured on the top surface of the component. Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 250°C.



Marking

- Capacitance
- Capacitance tolerance code
- Rated voltage code
- Capacitor type P for GPC
- Manufacturing date code

Rated Voltage	Code
63 VDC	C
100 VDC	D
160 VDC	F
250 VDC	H
400 VDC	K
630 VCD	M
1,000 VDC	P

Manufacturing Date Code (IEC 60062)			
Y = Year, Z = Month			
Year	**Code**	**Month**	**Code**
2000	M	January	1
2001	N	February	2
2002	P	March	3
2003	R	April	4
2004	S	May	5
2005	T	June	6
2006	U	July	7
2007	V	August	8
2008	W	September	9
2009	X	October	O
2010	A	November	N
2011	B	December	D
2012	C		
2013	D		
2014	E		
2015	F		
2016	H		
2017	J		
2018	K		
2019	L		
2020	M		

LDB Series Unencapsulated Stacked Chip, Size 1206 – 1812, 16 and 50 VDC

Overview

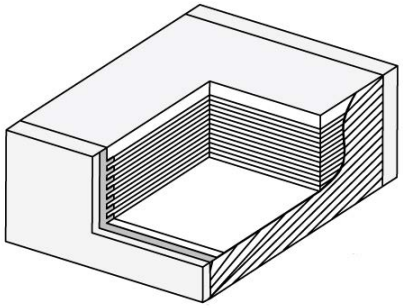
Polyphenylene sulphide (PPS) film capacitor for surface mounting.

Applications

Typical applications include timing, filtering and use as a memory capacitor. The LDB Series is designed for high stability, accuracy and temperature.

Benefits

- Rated voltage: 16 and 50 VDC
- Capacitance range: 0.0033 – 0.1 µF
- EIA size: 1206 – 1812
- Capacitance tolerance: ±2%, ±5%
- Climatic category: 55/125/56
- RoHS Complaint and lead-free terminations
- Operating temperature range of -55˚C to +125˚C



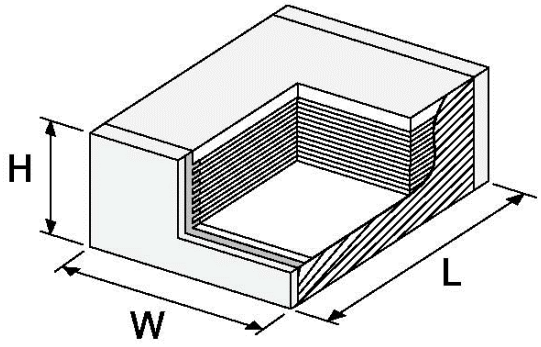
Part Number System

LDB	A	A	2120	G	C	5	N	0
Series	Rated Voltage (VDC)	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Dielectric	Version	Packaging	Internal Use
Metallized PPS	A = 16 C = 50	See Dimension Table	Digits 2-4 indicate the first three digits of the capacitance value. First digit indicates the number of zeros to be added.	G = ±2% J = ±5%	C = PPS	5 = Standard	See Ordering Options Table	0 (Standard)

Ordering Options Table

Packaging Type	Packaging Code
Standard Packaging Options	
Tape & Reel (Standard Reel)	N

Dimensions – Millimeters



Size Code	Chip Size (EIA)	W		H	L	
		Nominal	Tolerance		Nominal	Tolerance
A	1206	1.7	+/-0.2	See Part Number Table	3.3	+0.3/-0.1
B	1210	2.5	+/-0.3		3.3	+0.3/-0.1
C	1812	3.3	+/-0.3		4.7	+0.3/-0.2

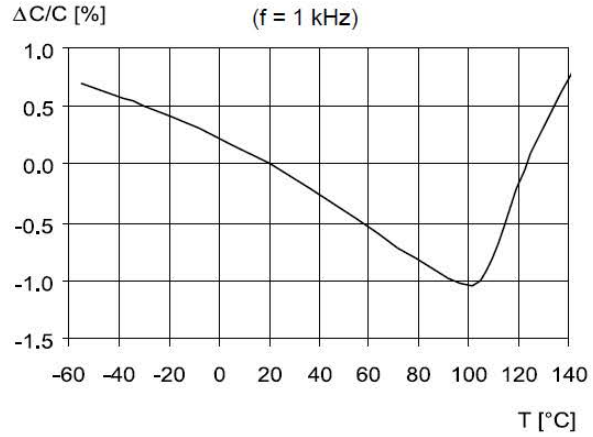
Performance Characteristics

Rated Voltage (VDC)	16	50
Capacitance Range (µF)	0.012 – 0.1	0.0033 – 0.1
Chip Size (EIA)	1206 – 1812	
Capacitance Values	E12 series	
Capacitance Tolerance	±2%, ±5%	
Category Temperature Range	-55°C to +125°C	
Rated Temperature	+105°C	
Voltage Derating	The rated voltage is decreased with 1.25%/°C from +105°C to +125°C	
Climatic Category	55/125/56	
Capacitance Drift	Maximum 1% after a 2 year storage period at a temperature of +10°C to +40°C and a relative humidity of 40% to 60%	
Reliability (Reference MIL-HDBK-217)	Failure rate ≤ 1 FIT, T = +40°C, V = 0.5 x V_R	
	1 FIT = 10^{-9} failures / (components * hours)	
	Failure criteria: open or short circuit, cap. change > 10%, DF 2 times the catalog limits, IR < 0.005 x initial limit	
Insulation Resistance	Measured at +25°C ±5°C	
	Minimum Value Between Terminals	
	3,000 MΩ	
	Charging time: 1 minute Charging voltage: 10 V_{DC} for VR = 16 V_{DC} 50 V_{DC} for VR = 50 V_{DC}	
Dissipation Factor	Maximum Values at 25°C ±5°C	
	1 kHz	0.6%
Surge Voltage Test	1.75 x V_R (5 seconds; T = 25 ± 5°C)	

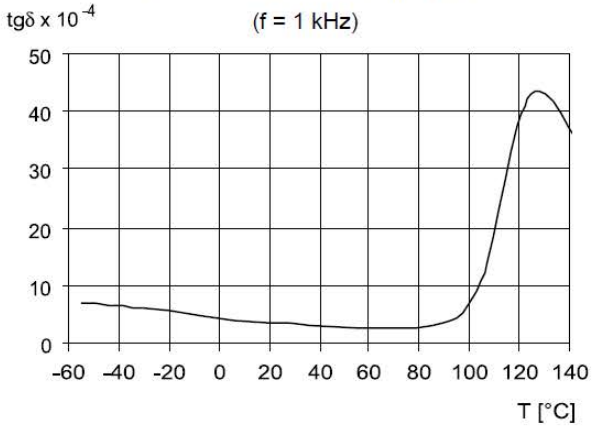
PPS Dielectric Typical Temperature Graphs

PPS

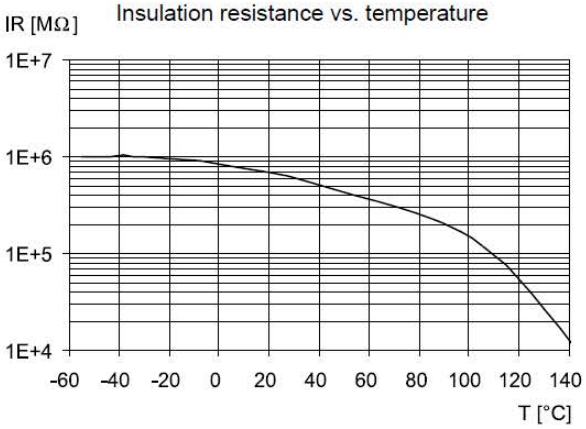
Capacitance vs. temperature



Dissipation factor vs. temperature



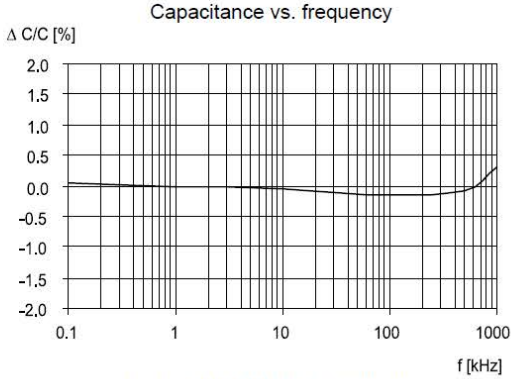
Insulation resistance vs. temperature



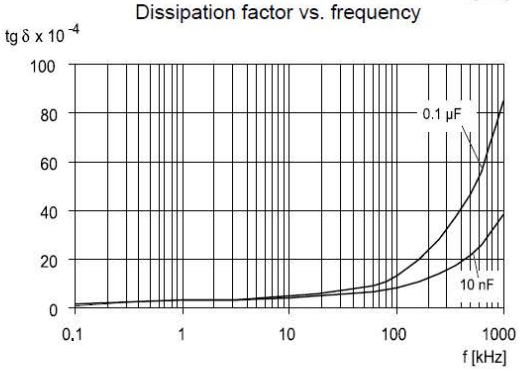
PPS Dielectric Typical Frequency Graphs

PPS

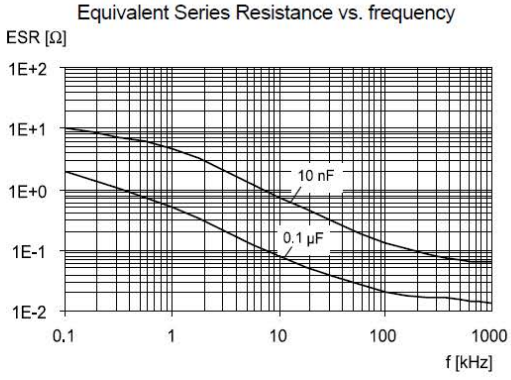
Capacitance vs. frequency



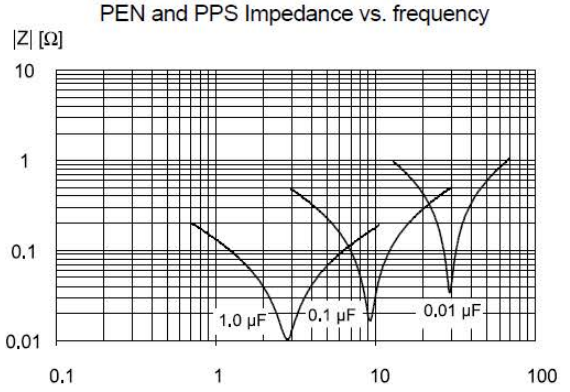
Dissipation factor vs. frequency



Equivalent Series Resistance vs. frequency



PEN and PPS Impedance vs. frequency



Note: measurements performed at T = 25 ± 5°C

Environmental Test Data

Damp Heat, Steady State	
Test Conditions	
Temperature	+40°C ±2°C
Relative Humidity (RH)	93% ±2%
Test Duration	56 days
Performance	
Capacitance Change |Δ C/C|	≤ 5%
DF Change (Δtgδ)	≤ 30 x 10^{-4} at 1 kHz
Insulation Resistance	≥ 50% of limit value

Endurance	
Test Conditions	
Temperature	125°C ±2°C
Test Duration	2,000 hours
Voltage Applied	1.25 x V_C
Performance	
Capacitance Change |Δ C/C|	≤ 3%
DF Change (Δtgδ)	≤ 30 x 10^{-4} at 1 kHz
Insulation Resistance	≥ 50% of limit value

Rapid Change of Temperature	
Test Conditions	
Temperature	1 hour at -55°C, 1 hour at +125°C
Number of Cycles	1,000
Performance	
Capacitance Change |Δ C/C|	≤ 3%
DF Change (Δtgδ)	≤ 50 x 10^{-4} at 1 kHz
Insulation Resistance	≥ limit value
No Mechanical Damage	

Reflow	
Test Conditions	See Solder Process
Performance	
Capacitance Change |Δ C/C|	≤ 3%
DF Change (Δtgδ)	≤ 50 x 10^{-4} at 1 kHz
Insulation Resistance	≥ limit value
No Mechanical Damage	

Bending	
Test Conditions	
Deflection	1 to 6 mm
Performance	
Capacitance Change |Δ C/C|	≤ 1%
No visible damage on the terminations (pealing) neither on the body (cracking)	

Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

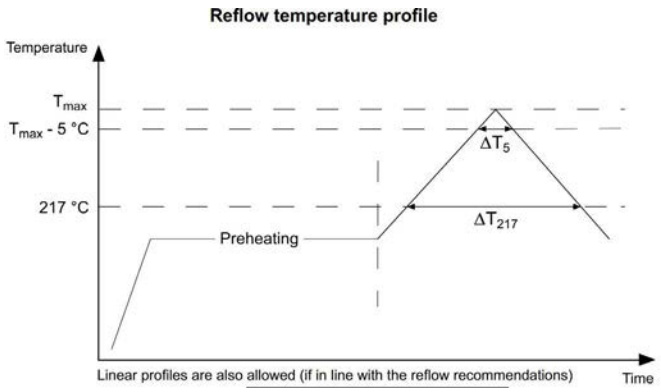
Table 1 – Ratings & Part Number Reference

VDC	Capacitance Value (µF)	Size Code	Dimensions in mm			Chip Size	New KEMET Part Number	Legacy Part Number
			B	H	L			
16	0.012	A	1.7	1.1	3.3	1206	DBAA2120(1)C5N0	LDBAA2120(1)C5N0
16	0.015	A	1.7	1.1	3.3	1206	DBAA2150(1)C5N0	LDBAA2150(1)C5N0
16	0.018	A	1.7	1.1	3.3	1206	DBAA2180(1)C5N0	LDBAA2180(1)C5N0
16	0.022	A	1.7	1.1	3.3	1206	DBAA2220(1)C5N0	LDBAA2220(1)C5N0
16	0.027	A	1.7	1.1	3.3	1206	DBAA2270(1)C5N0	LDBAA2270(1)C5N0
16	0.033	A	1.7	1.1	3.3	1206	DBAA2330(1)C5N0	LDBAA2330(1)C5N0
16	0.039	A	1.7	1.2	3.3	1206	DBAA2390(1)C5N0	LDBAA2390(1)C5N0
16	0.047	A	1.7	1.3	3.3	1206	DBAA2470(1)C5N0	LDBAA2470(1)C5N0
16	0.056	B	2.5	1.7	3.3	1210	DBAB2560(1)C5N0	LDBAB2560(1)C5N0
16	0.068	B	2.5	1.7	3.3	1210	DBAB2680(1)C5N0	LDBAB2680(1)C5N0
16	0.082	B	2.5	1.7	3.3	1210	DBAB2824(1)C5N0	LDBAB2824(1)C5N0
16	0.10	B	2.5	2.0	3.3	1210	DBAB3100(1)C5N0	LDBAB3100(1)C5N0
50	0.0033	A	1.7	1.1	3.3	1206	DBCA1330(1)C5N0	LDBCA1330(1)C5N0
50	0.0039	A	1.7	1.1	3.3	1206	DBCA1390(1)C5N0	LDBCA1390(1)C5N0
50	0.0047	A	1.7	1.1	3.3	1206	DBCA1470(1)C5N0	LDBCA1470(1)C5N0
50	0.0056	A	1.7	1.1	3.3	1206	DBCA1560(1)C5N0	LDBCA1560(1)C5N0
50	0.0068	A	1.7	1.1	3.3	1206	DBCA1680(1)C5N0	LDBCA1680(1)C5N0
50	0.0082	A	1.7	1.1	3.3	1206	DBCA1820(1)C5N0	LDBCA1820(1)C5N0
50	0.010	A	1.7	1.1	3.3	1206	DBCA2100(1)C5N0	LDBCA2100(1)C5N0
50	0.012	A	1.7	1.1	3.3	1206	DBCA2120(1)C5N0	LDBCA2120(1)C5N0
50	0.015	B	2.5	1.4	3.3	1210	DBCB2150(1)C5N0	LDBCB2150(1)C5N0
50	0.018	B	2.5	1.5	3.3	1210	DBCB2180(1)C5N0	LDBCB2180(1)C5N0
50	0.022	B	2.5	1.5	3.3	1210	DBCB2220(1)C5N0	LDBCB2220(1)C5N0
50	0.027	B	2.5	1.5	3.3	1210	DBCB2270(1)C5N0	LDBCB2270(1)C5N0
50	0.033	B	2.5	1.7	3.3	1210	DBCB2330(1)C5N0	LDBCB2330(1)C5N0
50	0.039	B	2.5	1.9	3.3	1210	DBCB2390(1)C5N0	LDBCB2390(1)C5N0
50	0.047	B	2.5	2.3	3.3	1210	DBCB2470(1)C5N0	LDBCB2470(1)C5N0
50	0.056	C	3.3	1.7	4.7	1812	DBCC2560(1)C5N0	LDBCC2560(1)C5N0
50	0.068	C	3.3	1.7	4.7	1812	DBCC2680(1)C5N0	LDBCC2680(1)C5N0
50	0.082	C	3.3	1.7	4.7	1812	DBCC2824(1)C5N0	LDBCC2824(1)C5N0
50	0.10	C	3.3	2.0	4.7	1812	DBCC3100(1)C5N0	LDBCC3100(1)C5N0
VDC	**Capacitance Value (µF)**	**Size Code**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**New KEMET Part Number**	**Legacy Part Number**

(1) G = ±2%, J = ±5%.

Soldering Process

Reflow Recommendations	
Preheating	
Maximum Preheating Time	180 seconds
Minimum Temperature	150°C
Maximum Temperature	200°C
Maximum Time within T_{max} and T_{max} – 5°C (ΔT_5)	30 seconds ($T_{max} \leq 250°C$)
	10 seconds (250 °C < $T_{max} \leq 260°C$)
Maximum Time Over 217°C (ΔT_{217})	150 seconds
Maximum Temperature Ramp Rate	3°C/seconds (heating)
	6°C/seconds (cooling)
Second reflow	
If two reflow processes are needed, be sure that before the second reflow, the temperature on the capacitor's surface is lower than 50°C.	



** For LDB series this value is 260 °C.*

Maximum Temperature on Component Body (T_{max})

Capacitor	Capacitor Volume (mm^3)		
H_{max} (mm)	< 350	350 – 2,000	> 2,000
< 1.6	255°C *	255°C *	255°C *
1.6 – 2.5	255°C *	250°C	245°C
> 2.5	250°C	245°C	245°C

**In line with JEDEC STD 020D ed. June 2007 with some limitations.*
** For LDB series this value is 260 °C.*

Flux/Cleaning/Storage and Moisture

Flux suggestions

We suggest to use a no-clean flux with a halogen content lower than 0.1%.

Cleaning suggestions

To clean the PCB assembly we suggest to use a suitable solvent like Isopropyl Alcohol, deionized water or neutral pH detergents. Solvents like Toluene, Xylene and Trichloroethylene should not be used.

Flux/Cleaning/Storage and Moisture cont'd

Storage and moisture recommendations

KEMET SMD Film Capacitors are supplied in a MBB (Moisture Barrier Bag) Class 1. We can guarantee a 24 months shelf life (temperature ≤ 40°C/relative humidity ≤ 90%). After the MBB has been opened, components may stay in areas with controlled temperature and humidity (temperature ≤ 30°C/relative humidity ≤ 60%) for 168 hours [MSL 3] (rated voltage ≤ 100 VDC) or 696 hours [MSL 2a] (rated voltage > 100 VDC). For longer periods of time and/or higher temperature and/or higher relative humidity values, it is absolutely necessary to protect the components against humidity. If the reel inside the MBB is partially used, KEMET recommends to re-use the same MBB or to avoid areas without controlled temperature and humidity (see above). If the above conditions are not respected, components require a baking (minimum time: 48 hours at 55 ± 5°C) before the reflow.

Manual assembly recommendations

If PCBs are assembled manually, care must be taken to avoid any mechanical damage to the components. Our recommendations are the following (see Fig. 1):

1. When using tweezers, the components should be gripped across the two terminations (A);
2. Avoid any contact with the two cutting surfaces (C);
3. A vacuum pen is recommended on the top and bottom surfaces (B).

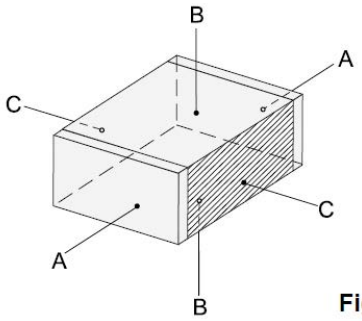


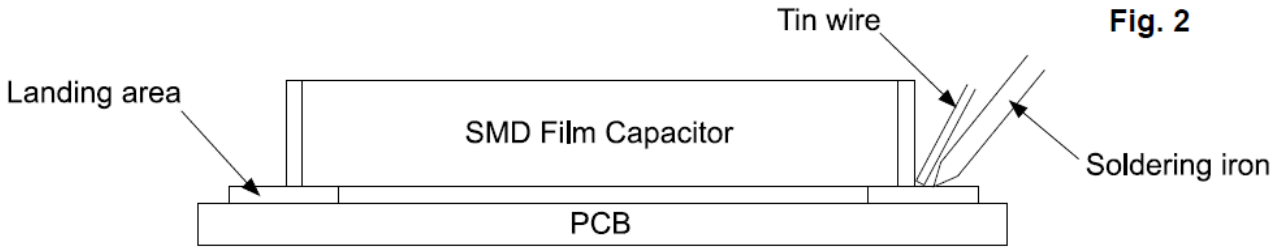
Fig. 1

Manual soldering recommendations

LDE and LDB series have been designed for Surface Mount Technology, pick & place machines and reflow soldering systems. Using a manual soldering iron, issues may occur because the typical temperature for manual soldering is around 350°C. Therefore please pay careful attention:

- Never touch the capacitor body with the soldering iron but rather touch the soldering iron and the end termination with the tin wire edge (see Fig. 2);
- If the soldering iron is equipped with a temperature controller device:
  Set the temperature to 250 ± 3°C and proceed as per Fig. 2 (the maximum soldering time, on both terminations, is 5 seconds);
- If the soldering iron is NOT equipped with a temperature controller device:
  This is the worst situation. The following are a few practical suggestions but, clearly, the operator's experience is extremely important:
  1. Proceed as per Fig. 2;
  2. As soon as the tin wire starts melting, move the soldering iron away as quickly as possible;
  3. Wait a few seconds and check that the soldering joint has been properly created;
- If the soldering iron is equipped with a hot air flow device:
  Set the hot air temperature to 250 ± 3°C and do not send the hot air directly onto the capacitor plastic body. In this situation, the operator's experience is very important;
- In any case, avoid mass-mounting SMD Film Capacitors manually.

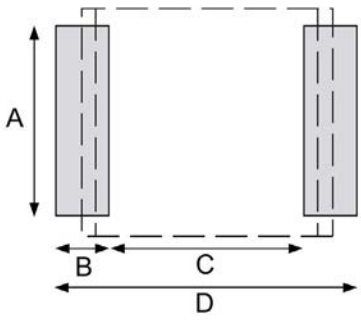
Fig. 2



Packaging Quantities

Chip Size (EIA)	Height (mm)	Reel
1206	1.1	3000
1206	1.2	3000
1206	1.3	3000
1210	1.4	2250
1210	1.5	2250
1210	1.7	2250
1210	1.9	2250
1210	2.0	2250
1210	2.3	2250
1812	1.7	4000
1812	2.0	3000

Landing

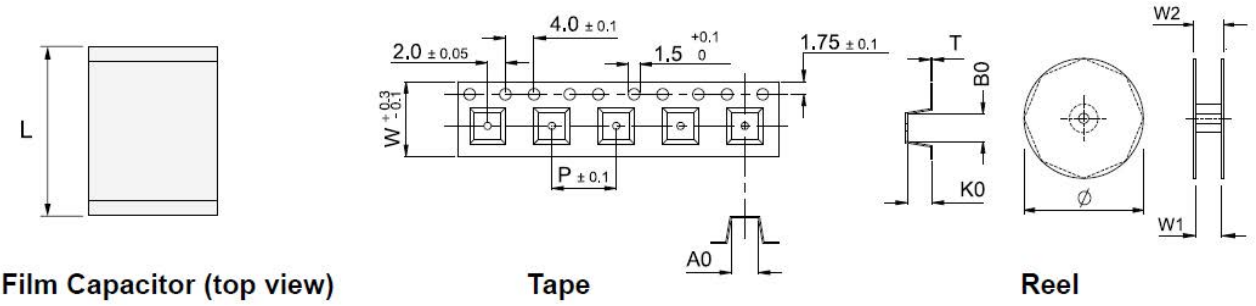


Size	Dimensions in mm			
	A	B	C	D
1206	1.5	1.1	2.3	4.5
1210	2.3	1.1	2.3	4.5
1812	3	1.7	3.1	6.5

These landing area dimensions have the aim of taking full advantage of the new RoHS 6 terminations design.
We suggest to use a Sn/Ag/Cu solder paste (suggested thickness: 0.10 – 0.15 mm).
If a NOT Lead Free solder paste is used, a minimum peak temperature of 210°C on the component's body is suggested.

Carrier Taping & Packaging (IEC 60286–2)

Horizontal Taping Orientation



SMD Film Capacitor (top view) **Tape** **Reel**

Chip Size (EIA) Horizontal Mounting	Dimensions in mm			Taping Specification							
	W	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
	Nominal	Nominal	Nominal	-0.1/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
1206	1.7	All	3.3	8	4	2	3.8	1.3	180	8	12
1210	2.5	All	3.3	8	4	3	3.8	2.1	180	8	12
1812	3.3	≤ 1.9	4.7	12	8	3.8	5.3	2	330	12	16
1812	3.3	2.1 – 2.6	4.7	12	8	3.9	5.2	2.6	330	12	16

In accordance with IEC 60286-3
Materials:
- carrier tape: antistatic material
- cover tape: polyester + polythene
- reel: recyclable polystyrene

All parts in reels are packed in hermetically sealed Moisture Barrier Bag (MBB) Class 1.

SMC Series Encapsulated, Size 2220 – 6560, 50 – 400 VDC

Overview

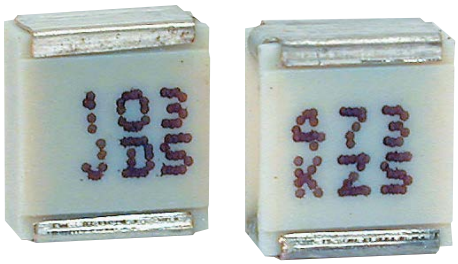
Polyphenylene sulphide (PPS) film capacitor for surface mounting. Encapsulation in self-extinguishing material meeting the requirements of UL 94 V–0. SMC capacitors meet the standards according to IEC 60384-20.

Applications

Typical applications include timing, filtering and use as a memory capacitor. The SMC Series is designed for high stability, accuracy and temperature. Not suitable for across-the-line application (see suppressor capacitors).

Benefits

- Rated voltage: 50 – 400 VDC
- Rated voltage: 30 – 200 VAC
- Capacitance range: 0.001 – 3.3 µF
- EIA size: 2220 – 6560
- Capacitance tolerance: ±2%, ±2.5%, ±5%
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of −55˚C to +125˚C



Legacy Part Number System

SMC	5.7	102	J	50	J33	TR12
Series	Chip Length (mm)	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Size Code	Packaging
Metallized PPS	5.7 7.3 10.2 12.7 16.5	First two digits represent significant figures. The third digit specifies number of zeros.	G = ±2% H = ±2.5% J = ±5%	50 100 250 400	See Dimension Table	See Ordering Options Table

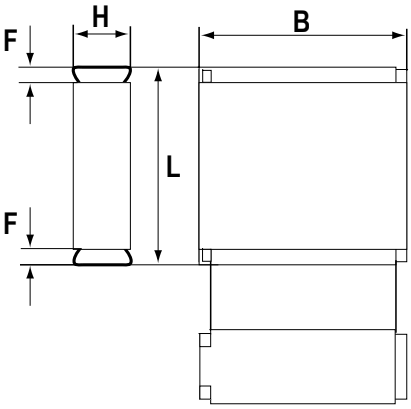
New KEMET Part Number System

F	125	P	P	102	J	050	V
Capacitor Class	Series	Chip Size	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging
F = Film	Metallized PPS	P = 2220 S = 2820 W = 4036 Y = 5045 Z = 6560	See Dimension Table	First two digits represent significant figures. The third digit specifies number of zeros.	G = ±2% R = ±2.5% J = ±5%	050 = 50 100 = 100 250 = 250 400 = 400	See Ordering Options Table

Ordering Options Table

Chip Size (EIA)	Packaging Type	KEMET Packaging Code	Legacy Packaging Code
2220	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR12
	Bulk (Bag)	A	BULK
2824	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR12
	Bulk (Bag)	A	BULK
4036	**Standard Packaging Options**		
	Tape & Reel (Horizontal Orientation Standard Reel)	V	TR16
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
5045	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
6560	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV44

Dimensions – Millimeters



KEMET Size Code	Legacy Size Code	Chip Size (EIA)	B		H		L		F	
			Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
PP	J33	2220	5.0	+/-0.2	3.0	+/-0.2	5.7	+/-0.2	0.5	Nominal
PU	J35	2220	5.0	+/-0.2	4.0	+/-0.2	5.7	+/-0.2	0.5	Nominal
SL	K33	2824	6.0	+/-0.2	3.0	+/-0.2	7.3	+/-0.2	0.5	Nominal
SP	K35	2824	6.0	+/-0.2	3.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
ST	K37	2824	6.0	+/-0.2	4.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
WP	A31	4036	9.1	+/-0.2	5.5	+/-0.2	10.2	+/-0.2	0.5	Nominal
YR	B31	5045	11.5	+/-0.2	6.5	+/-0.2	12.7	+/-0.2	0.5	Nominal
ZS	C31	6560	15	+/-0.2	7.0	+/-0.2	16.5	+/-0.2	0.5	Nominal

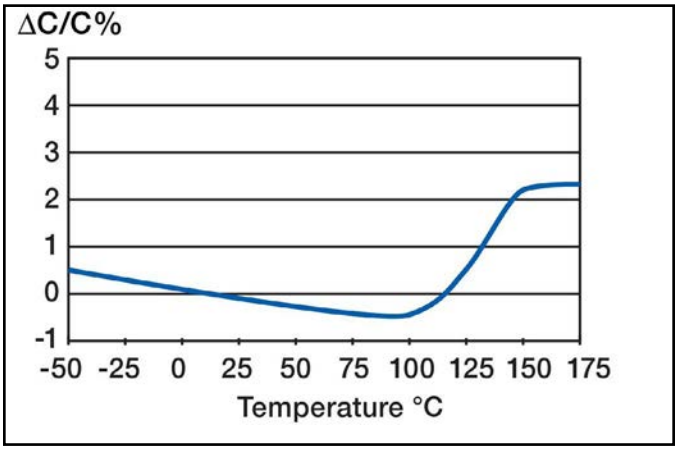
Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

Performance Characteristics

Rated Voltage (VDC)	50	100	250	400
Rated Voltage (VAC)	30	63	160	200
Capacitance Range (µF)	0.001 – 3.3	0.001 – 1.5	0.001 – 0.47	0.001 – 0.22
Chip Size (EIA)	2220 – 6560			
Capacitance Tolerance	±2%, ±2.5%, ±5%			
Category Temperature Range	−55°C to +125°C			
Rated Temperature	+100°C			
Voltage Derating	The rated voltage should be decreased with 1.25%/°C from +100°C to +125°C and 1.5%/°C from +125°C to 175°C			
Climatic Category	55/125/56			
Test Voltage	1.6 x V_R, 60 seconds			
Insulation Resistance	Measured at +20°C According to IEC 60384–19			
	Minimum Value Between Terminals			
			C ≤ 0.33 µF	C > 0.33 µF
	V_R ≤ 100		15,000 MΩ	5,000 MΩ • µF
	V_R > 100		30,000 MΩ	10,000 MΩ • µF
Dissipation Factor	Maximum Values at +23°C			
		C ≤ 0.1 µF	0.1 < C ≤ 1 µF	C > 1 µF
	1 kHz	0.15%	0.15%	0.15%
	10 kHz	0.25%	0.25%	0.30%
	100 kHz	0.50%	0.60%	
Pulse Rise Time	The capacitors can withstand an unlimited number of pulses with a dV/dt according to Table 1. For voltages (V) lower than the rated voltage (V_R), the specified dV/dt can be multiplied by V_R/V.			

Capacitance vs. Temperature



Dissipation Factor vs. Temperature

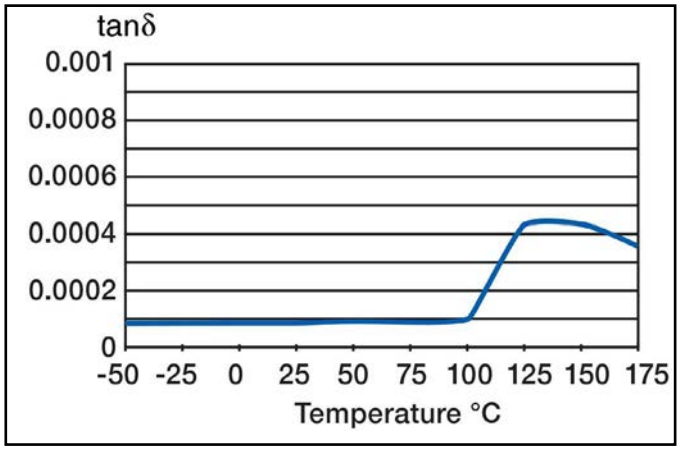


Table 1 – Ratings & Part Number Reference

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	0.0010	PP/J33	5.0	3.0	5.7	2220	20	F125PP102(1)050(2)	SMC5.7102(1)50J33(2)
50	30	0.0012	PP/J33	5.0	3.0	5.7	2220	20	F125PP122(1)050(2)	SMC5.7122(1)50J33(2)
50	30	0.0015	PP/J33	5.0	3.0	5.7	2220	20	F125PP152(1)050(2)	SMC5.7152(1)50J33(2)
50	30	0.0018	PP/J33	5.0	3.0	5.7	2220	20	F125PP182(1)050(2)	SMC5.7182(1)50J33(2)
50	30	0.0022	PP/J33	5.0	3.0	5.7	2220	20	F125PP222(1)050(2)	SMC5.7222(1)50J33(2)
50	30	0.0027	PP/J33	5.0	3.0	5.7	2220	20	F125PP272(1)050(2)	SMC5.7272(1)50J33(2)
50	30	0.0033	PP/J33	5.0	3.0	5.7	2220	20	F125PP332(1)050(2)	SMC5.7332(1)50J33(2)
50	30	0.0039	PP/J33	5.0	3.0	5.7	2220	20	F125PP392(1)050(2)	SMC5.7392(1)50J33(2)
50	30	0.0047	PP/J33	5.0	3.0	5.7	2220	20	F125PP472(1)050(2)	SMC5.7472(1)50J33(2)
50	30	0.0056	PP/J33	5.0	3.0	5.7	2220	20	F125PP562(1)050(2)	SMC5.7562(1)50J33(2)
50	30	0.0068	PP/J33	5.0	3.0	5.7	2220	20	F125PP682(1)050(2)	SMC5.7682(1)50J33(2)
50	30	0.0082	PP/J33	5.0	3.0	5.7	2220	20	F125PP822(1)050(2)	SMC5.7822(1)50J33(2)
50	30	0.010	PP/J33	5.0	3.0	5.7	2220	20	F125PP103(1)050(2)	SMC5.7103(1)50J33(2)
50	30	0.012	PP/J33	5.0	3.0	5.7	2220	20	F125PP123(1)050(2)	SMC5.7123(1)50J33(2)
50	30	0.015	PP/J33	5.0	3.0	5.7	2220	15	F125PP153(1)050(2)	SMC5.7153(1)50J33(2)
50	30	0.018	PP/J33	5.0	3.0	5.7	2220	15	F125PP183(1)050(2)	SMC5.7183(1)50J33(2)
50	30	0.022	PP/J33	5.0	3.0	5.7	2220	15	F125PP223(1)050(2)	SMC5.7223(1)50J33(2)
50	30	0.027	PP/J33	5.0	3.0	5.7	2220	15	F125PP273(1)050(2)	SMC5.7273(1)50J33(2)
50	30	0.033	PP/J33	5.0	3.0	5.7	2220	15	F125PP333(1)050(2)	SMC5.7333(1)50J33(2)
50	30	0.039	PP/J33	5.0	3.0	5.7	2220	6	F125PP393(1)050(2)	SMC5.7393(1)50J33(2)
50	30	0.047	PP/J33	5.0	3.0	5.7	2220	6	F125PP473(1)050(2)	SMC5.7473(1)50J33(2)
50	30	0.056	PU/J35	5.0	4.0	5.7	2220	6	F125PU563(1)050(2)	SMC5.7563(1)50J35(2)
50	30	0.068	PU/J35	5.0	4.0	5.7	2220	6	F125PU683(1)050(2)	SMC5.7683(1)50J35(2)
50	30	0.082	PU/J35	5.0	4.0	5.7	2220	6	F125PU823(1)050(2)	SMC5.7823(1)50J35(2)
50	30	0.10	PU/J35	5.0	4.0	5.7	2220	6	F125PU104(1)050(2)	SMC5.7104(1)50J35(2)
50	30	0.0010	SL/K33	6.0	3.0	7.3	2824	20	F125SL102(1)050(2)	SMC7.3102(1)50K33(2)
50	30	0.0012	SL/K33	6.0	3.0	7.3	2824	20	F125SL122(1)050(2)	SMC7.3122(1)50K33(2)
50	30	0.0015	SL/K33	6.0	3.0	7.3	2824	20	F125SL152(1)050(2)	SMC7.3152(1)50K33(2)
50	30	0.0018	SL/K33	6.0	3.0	7.3	2824	20	F125SL182(1)050(2)	SMC7.3182(1)50K33(2)
50	30	0.0022	SL/K33	6.0	3.0	7.3	2824	20	F125SL222(1)050(2)	SMC7.3222(1)50K33(2)
50	30	0.0027	SL/K33	6.0	3.0	7.3	2824	20	F125SL272(1)050(2)	SMC7.3272(1)50K33(2)
50	30	0.0033	SL/K33	6.0	3.0	7.3	2824	20	F125SL332(1)050(2)	SMC7.3332(1)50K33(2)
50	30	0.0039	SL/K33	6.0	3.0	7.3	2824	20	F125SL392(1)050(2)	SMC7.3392(1)50K33(2)
50	30	0.0047	SL/K33	6.0	3.0	7.3	2824	20	F125SL472(1)050(2)	SMC7.3472(1)50K33(2)
50	30	0.0056	SL/K33	6.0	3.0	7.3	2824	20	F125SL562(1)050(2)	SMC7.3562(1)50K33(2)
50	30	0.0068	SL/K33	6.0	3.0	7.3	2824	20	F125SL682(1)050(2)	SMC7.3682(1)50K33(2)
50	30	0.0082	SL/K33	6.0	3.0	7.3	2824	20	F125SL822(1)050(2)	SMC7.3822(1)50K33(2)
50	30	0.010	SL/K33	6.0	3.0	7.3	2824	20	F125SL103(1)050(2)	SMC7.3103(1)50K33(2)
50	30	0.012	SL/K33	6.0	3.0	7.3	2824	20	F125SL123(1)050(2)	SMC7.3123(1)50K33(2)
50	30	0.015	SL/K33	6.0	3.0	7.3	2824	20	F125SL153(1)050(2)	SMC7.3153(1)50K33(2)
50	30	0.018	SL/K33	6.0	3.0	7.3	2824	20	F125SL183(1)050(2)	SMC7.3183(1)50K33(2)
50	30	0.022	SL/K33	6.0	3.0	7.3	2824	20	F125SL223(1)050(2)	SMC7.3223(1)50K33(2)
50	30	0.027	SL/K33	6.0	3.0	7.3	2824	20	F125SL273(1)050(2)	SMC7.3273(1)50K33(2)
50	30	0.033	SL/K33	6.0	3.0	7.3	2824	15	F125SL333(1)050(2)	SMC7.3333(1)50K33(2)
50	30	0.039	SL/K33	6.0	3.0	7.3	2824	15	F125SL393(1)050(2)	SMC7.3393(1)50K33(2)
50	30	0.047	SL/K33	6.0	3.0	7.3	2824	15	F125SL473(1)050(2)	SMC7.3473(1)50K33(2)
50	30	0.056	SL/K33	6.0	3.0	7.3	2824	15	F125SL563(1)050(2)	SMC7.3563(1)50K33(2)
50	30	0.068	SL/K33	6.0	3.0	7.3	2824	15	F125SL683(1)050(2)	SMC7.3683(1)50K33(2)
50	30	0.082	SL/K33	6.0	3.0	7.3	2824	6	F125SL823(1)050(2)	SMC7.3823(1)50K33(2)
50	30	0.10	SL/K33	6.0	3.0	7.3	2824	6	F125SL104(1)050(2)	SMC7.3104(1)50K33(2)
50	30	0.12	SP/K35	6.0	3.5	7.3	2824	6	F125SP124(1)050(2)	SMC7.3124(1)50K35(2)
50	30	0.15	SP/K35	6.0	3.5	7.3	2824	6	F125SP154(1)050(2)	SMC7.3154(1)50K35(2)
50	30	0.18	SP/K35	6.0	3.5	7.3	2824	6	F125SP184(1)050(2)	SMC7.3184(1)50K35(2)
50	30	0.22	ST/K37	6.0	4.5	7.3	2824	6	F125ST224(1)050(2)	SMC7.3224(1)50K37(2)
50	30	0.010	WP/A31	9.1	5.5	10.2	4036	4	F125WP103(1)050(2)	SMC10.2103(1)50A31(2)
50	30	0.012	WP/A31	9.1	5.5	10.2	4036	4	F125WP123(1)050(2)	SMC10.2123(1)50A31(2)
50	30	0.015	WP/A31	9.1	5.5	10.2	4036	4	F125WP153(1)050(2)	SMC10.2153(1)50A31(2)
50	30	0.018	WP/A31	9.1	5.5	10.2	4036	4	F125WP183(1)050(2)	SMC10.2183(1)50A31(2)
50	30	0.022	WP/A31	9.1	5.5	10.2	4036	4	F125WP223(1)050(2)	SMC10.2223(1)50A31(2)
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	0.027	WP/A31	9.1	5.5	10.2	4036	4	F125WP273(1)050(2)	SMC10.2273(1)50A31(2)
50	30	0.033	WP/A31	9.1	5.5	10.2	4036	4	F125WP333(1)050(2)	SMC10.2333(1)50A31(2)
50	30	0.039	WP/A31	9.1	5.5	10.2	4036	4	F125WP393(1)050(2)	SMC10.2393(1)50A31(2)
50	30	0.047	WP/A31	9.1	5.5	10.2	4036	4	F125WP473(1)050(2)	SMC10.2473(1)50A31(2)
50	30	0.056	WP/A31	9.1	5.5	10.2	4036	4	F125WP563(1)050(2)	SMC10.2563(1)50A31(2)
50	30	0.068	WP/A31	9.1	5.5	10.2	4036	4	F125WP683(1)050(2)	SMC10.2683(1)50A31(2)
50	30	0.082	WP/A31	9.1	5.5	10.2	4036	4	F125WP823(1)050(2)	SMC10.2823(1)50A31(2)
50	30	0.10	WP/A31	9.1	5.5	10.2	4036	4	F125WP104(1)050(2)	SMC10.2104(1)50A31(2)
50	30	0.12	WP/A31	9.1	5.5	10.2	4036	4	F125WP124(1)050(2)	SMC10.2124(1)50A31(2)
50	30	0.15	WP/A31	9.1	5.5	10.2	4036	4	F125WP154(1)050(2)	SMC10.2154(1)50A31(2)
50	30	0.18	WP/A31	9.1	5.5	10.2	4036	4	F125WP184(1)050(2)	SMC10.2184(1)50A31(2)
50	30	0.22	WP/A31	9.1	5.5	10.2	4036	4	F125WP224(1)050(2)	SMC10.2224(1)50A31(2)
50	30	0.27	WP/A31	9.1	5.5	10.2	4036	4	F125WP274(1)050(2)	SMC10.2274(1)50A31(2)
50	30	0.33	WP/A31	9.1	5.5	10.2	4036	4	F125WP334(1)050(2)	SMC10.2334(1)50A31(2)
50	30	0.39	WP/A31	9.1	5.5	10.2	4036	4	F125WP394(1)050(2)	SMC10.2394(1)50A31(2)
50	30	0.47	WP/A31	9.1	5.5	10.2	4036	4	F125WP474(1)050(2)	SMC10.2474(1)50A31(2)
50	30	0.56	WP/A31	9.1	5.5	10.2	4036	4	F125WP564(1)050(2)	SMC10.2564(1)50A31(2)
50	30	0.68	WP/A31	9.1	5.5	10.2	4036	4	F125WP684(1)050(2)	SMC10.2684(1)50A31(2)
50	30	0.82	WP/A31	9.1	5.5	10.2	4036	4	F125WP824(1)050(2)	SMC10.2824(1)50A31(2)
50	30	1.0	YR/B31	11.5	6.5	12.7	5045	3	F125YR105(1)050(2)	SMC12.7105(1)50B31(2)
50	30	1.2	YR/B31	11.5	6.5	12.7	5045	3	F125YR125(1)050(2)	SMC12.7125(1)50B31(2)
50	30	1.5	YR/B31	11.5	6.5	12.7	5045	3	F125YR155(1)050(2)	SMC12.7155(1)50B31(2)
50	30	1.8	ZS/C31	15.0	7.0	16.5	6560	2	F125ZS185(1)050(2)	SMC16.5185(1)50C31(2)
50	30	2.2	ZS/C31	15.0	7.0	16.5	6560	2	F125ZS225(1)050(2)	SMC16.5225(1)50C31(2)
50	30	2.7	ZS/C31	15.0	7.0	16.5	6560	2	F125ZS275(1)050(2)	SMC16.5275(1)50C31(2)
50	30	3.3	ZS/C31	15.0	7.0	16.5	6560	2	F125ZS335(1)050(2)	SMC16.5335(1)50C31(2)
100	63	0.0010	PP/J33	5.0	3.0	5.7	2220	20	F125PP102(1)100(2)	SMC5.7102(1)100J33(2)
100	63	0.0012	PP/J33	5.0	3.0	5.7	2220	20	F125PP122(1)100(2)	SMC5.7122(1)100J33(2)
100	63	0.0015	PP/J33	5.0	3.0	5.7	2220	20	F125PP152(1)100(2)	SMC5.7152(1)100J33(2)
100	63	0.0018	PP/J33	5.0	3.0	5.7	2220	20	F125PP182(1)100(2)	SMC5.7182(1)100J33(2)
100	63	0.0022	PP/J33	5.0	3.0	5.7	2220	20	F125PP222(1)100(2)	SMC5.7222(1)100J33(2)
100	63	0.0027	PP/J33	5.0	3.0	5.7	2220	20	F125PP272(1)100(2)	SMC5.7272(1)100J33(2)
100	63	0.0033	PP/J33	5.0	3.0	5.7	2220	20	F125PP332(1)100(2)	SMC5.7332(1)100J33(2)
100	63	0.0039	PP/J33	5.0	3.0	5.7	2220	20	F125PP392(1)100(2)	SMC5.7392(1)100J33(2)
100	63	0.0047	PP/J33	5.0	3.0	5.7	2220	20	F125PP472(1)100(2)	SMC5.7472(1)100J33(2)
100	63	0.0056	PP/J33	5.0	3.0	5.7	2220	20	F125PP562(1)100(2)	SMC5.7562(1)100J33(2)
100	63	0.0068	PP/J33	5.0	3.0	5.7	2220	20	F125PP682(1)100(2)	SMC5.7682(1)100J33(2)
100	63	0.0082	PP/J33	5.0	3.0	5.7	2220	20	F125PP822(1)100(2)	SMC5.7822(1)100J33(2)
100	63	0.010	PP/J33	5.0	3.0	5.7	2220	20	F125PP103(1)100(2)	SMC5.7103(1)100J33(2)
100	63	0.012	PP/J33	5.0	3.0	5.7	2220	20	F125PP123(1)100(2)	SMC5.7123(1)100J33(2)
100	63	0.015	PP/J33	5.0	3.0	5.7	2220	15	F125PP153(1)100(2)	SMC5.7153(1)100J33(2)
100	63	0.018	PP/J33	5.0	3.0	5.7	2220	15	F125PP183(1)100(2)	SMC5.7183(1)100J33(2)
100	63	0.022	PP/J33	5.0	3.0	5.7	2220	15	F125PP223(1)100(2)	SMC5.7223(1)100J33(2)
100	63	0.027	PU/J35	5.0	4.0	5.7	2220	15	F125PU273(1)100(2)	SMC5.7273(1)100J35(2)
100	63	0.033	PU/J35	5.0	4.0	5.7	2220	15	F125PU333(1)100(2)	SMC5.7333(1)100J35(2)
100	63	0.0010	SL/K33	6.0	3.0	7.3	2824	20	F125SL102(1)100(2)	SMC7.3102(1)100K33(2)
100	63	0.0012	SL/K33	6.0	3.0	7.3	2824	20	F125SL122(1)100(2)	SMC7.3122(1)100K33(2)
100	63	0.0015	SL/K33	6.0	3.0	7.3	2824	20	F125SL152(1)100(2)	SMC7.3152(1)100K33(2)
100	63	0.0018	SL/K33	6.0	3.0	7.3	2824	20	F125SL182(1)100(2)	SMC7.3182(1)100K33(2)
100	63	0.0022	SL/K33	6.0	3.0	7.3	2824	20	F125SL222(1)100(2)	SMC7.3222(1)100K33(2)
100	63	0.0027	SL/K33	6.0	3.0	7.3	2824	20	F125SL272(1)100(2)	SMC7.3272(1)100K33(2)
100	63	0.0033	SL/K33	6.0	3.0	7.3	2824	20	F125SL332(1)100(2)	SMC7.3332(1)100K33(2)
100	63	0.0039	SL/K33	6.0	3.0	7.3	2824	20	F125SL392(1)100(2)	SMC7.3392(1)100K33(2)
100	63	0.0047	SL/K33	6.0	3.0	7.3	2824	20	F125SL472(1)100(2)	SMC7.3472(1)100K33(2)
100	63	0.0056	SL/K33	6.0	3.0	7.3	2824	20	F125SL562(1)100(2)	SMC7.3562(1)100K33(2)
100	63	0.0068	SL/K33	6.0	3.0	7.3	2824	20	F125SL682(1)100(2)	SMC7.3682(1)100K33(2)
100	63	0.0082	SL/K33	6.0	3.0	7.3	2824	20	F125SL822(1)100(2)	SMC7.3822(1)100K33(2)
100	63	0.010	SL/K33	6.0	3.0	7.3	2824	20	F125SL103(1)100(2)	SMC7.3103(1)100K33(2)
100	63	0.012	SL/K33	6.0	3.0	7.3	2824	20	F125SL123(1)100(2)	SMC7.3123(1)100K33(2)
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
100	63	0.015	SL/K33	6.0	3.0	7.3	2824	20	F125SL153(1)100(2)	SMC7.3153(1)100K33(2)
100	63	0.018	SL/K33	6.0	3.0	7.3	2824	20	F125SL183(1)100(2)	SMC7.3183(1)100K33(2)
100	63	0.022	SL/K33	6.0	3.0	7.3	2824	20	F125SL223(1)100(2)	SMC7.3223(1)100K33(2)
100	63	0.027	SL/K33	6.0	3.0	7.3	2824	15	F125SL273(1)100(2)	SMC7.3273(1)100K33(2)
100	63	0.033	SL/K33	6.0	3.0	7.3	2824	15	F125SL333(1)100(2)	SMC7.3333(1)100K33(2)
100	63	0.039	SP/K35	6.0	3.5	7.3	2824	15	F125SP393(1)100(2)	SMC7.3393(1)100K35(2)
100	63	0.047	SP/K35	6.0	3.5	7.3	2824	15	F125SP473(1)100(2)	SMC7.3473(1)100K35(2)
100	63	0.056	ST/K37	6.0	4.5	7.3	2824	15	F125ST563(1)100(2)	SMC7.3563(1)100K37(2)
100	63	0.068	ST/K37	6.0	4.5	7.3	2824	15	F125ST683(1)100(2)	SMC7.3683(1)100K37(2)
100	63	0.010	WP/A31	9.1	5.5	10.2	4036	6	F125WP103(1)100(2)	SMC10.2103(1)100A31(2)
100	63	0.012	WP/A31	9.1	5.5	10.2	4036	6	F125WP123(1)100(2)	SMC10.2123(1)100A31(2)
100	63	0.015	WP/A31	9.1	5.5	10.2	4036	6	F125WP153(1)100(2)	SMC10.2153(1)100A31(2)
100	63	0.018	WP/A31	9.1	5.5	10.2	4036	6	F125WP183(1)100(2)	SMC10.2183(1)100A31(2)
100	63	0.022	WP/A31	9.1	5.5	10.2	4036	6	F125WP223(1)100(2)	SMC10.2223(1)100A31(2)
100	63	0.027	WP/A31	9.1	5.5	10.2	4036	6	F125WP273(1)100(2)	SMC10.2273(1)100A31(2)
100	63	0.033	WP/A31	9.1	5.5	10.2	4036	6	F125WP333(1)100(2)	SMC10.2333(1)100A31(2)
100	63	0.039	WP/A31	9.1	5.5	10.2	4036	6	F125WP393(1)100(2)	SMC10.2393(1)100A31(2)
100	63	0.047	WP/A31	9.1	5.5	10.2	4036	6	F125WP473(1)100(2)	SMC10.2473(1)100A31(2)
100	63	0.056	WP/A31	9.1	5.5	10.2	4036	6	F125WP563(1)100(2)	SMC10.2563(1)100A31(2)
100	63	0.068	WP/A31	9.1	5.5	10.2	4036	6	F125WP683(1)100(2)	SMC10.2683(1)100A31(2)
100	63	0.082	WP/A31	9.1	5.5	10.2	4036	6	F125WP823(1)100(2)	SMC10.2823(1)100A31(2)
100	63	0.10	WP/A31	9.1	5.5	10.2	4036	6	F125WP104(1)100(2)	SMC10.2104(1)100A31(2)
100	63	0.12	WP/A31	9.1	5.5	10.2	4036	6	F125WP124(1)100(2)	SMC10.2124(1)100A31(2)
100	63	0.15	WP/A31	9.1	5.5	10.2	4036	6	F125WP154(1)100(2)	SMC10.2154(1)100A31(2)
100	63	0.18	WP/A31	9.1	5.5	10.2	4036	6	F125WP184(1)100(2)	SMC10.2184(1)100A31(2)
100	63	0.22	WP/A31	9.1	5.5	10.2	4036	6	F125WP224(1)100(2)	SMC10.2224(1)100A31(2)
100	63	0.27	WP/A31	9.1	5.5	10.2	4036	6	F125WP274(1)100(2)	SMC10.2274(1)100A31(2)
100	63	0.33	YR/B31	11.5	6.5	12.7	5045	5	F125YR334(1)100(2)	SMC12.7334(1)100B31(2)
100	63	0.39	YR/B31	11.5	6.5	12.7	5045	5	F125YR394(1)100(2)	SMC12.7394(1)100B31(2)
100	63	0.47	YR/B31	11.5	6.5	12.7	5045	5	F125YR474(1)100(2)	SMC12.7474(1)100B31(2)
100	63	0.56	YR/B31	11.5	6.5	12.7	5045	5	F125YR564(1)100(2)	SMC12.7564(1)100B31(2)
100	63	0.68	ZS/C31	15.0	7.0	16.5	6560	3	F125ZS684(1)100(2)	SMC16.5684(1)100C31(2)
100	63	0.82	ZS/C31	15.0	7.0	16.5	6560	3	F125ZS824(1)100(2)	SMC16.5824(1)100C31(2)
100	63	1.0	ZS/C31	15.0	7.0	16.5	6560	3	F125ZS105(1)100(2)	SMC16.5105(1)100C31(2)
100	63	1.2	ZS/C31	15.0	7.0	16.5	6560	3	F125ZS125(1)100(2)	SMC16.5125(1)100C31(2)
100	63	1.5	ZS/C31	15.0	7.0	16.5	6560	3	F125ZS155(1)100(2)	SMC16.5155(1)100C31(2)
250	160	0.0010	PP/J33	5.0	3.0	5.7	2220	20	F125PP102(1)250(2)	SMC5.7102(1)250J33(2)
250	160	0.0012	PP/J33	5.0	3.0	5.7	2220	20	F125PP122(1)250(2)	SMC5.7122(1)250J33(2)
250	160	0.0015	PP/J33	5.0	3.0	5.7	2220	20	F125PP152(1)250(2)	SMC5.7152(1)250J33(2)
250	160	0.0018	PP/J33	5.0	3.0	5.7	2220	20	F125PP182(1)250(2)	SMC5.7182(1)250J33(2)
250	160	0.0022	PP/J33	5.0	3.0	5.7	2220	20	F125PP222(1)250(2)	SMC5.7222(1)250J33(2)
250	160	0.0027	PP/J33	5.0	3.0	5.7	2220	20	F125PP272(1)250(2)	SMC5.7272(1)250J33(2)
250	160	0.0033	PP/J33	5.0	3.0	5.7	2220	20	F125PP332(1)250(2)	SMC5.7332(1)250J33(2)
250	160	0.0039	PP/J33	5.0	3.0	5.7	2220	20	F125PP392(1)250(2)	SMC5.7392(1)250J33(2)
250	160	0.0047	PP/J33	5.0	3.0	5.7	2220	20	F125PP472(1)250(2)	SMC5.7472(1)250J33(2)
250	160	0.0056	PP/J33	5.0	3.0	5.7	2220	20	F125PP562(1)250(2)	SMC5.7562(1)250J33(2)
250	160	0.0068	PP/J33	5.0	3.0	5.7	2220	20	F125PP682(1)250(2)	SMC5.7682(1)250J33(2)
250	160	0.0082	PU/J35	5.0	4.0	5.7	2220	20	F125PU822(1)250(2)	SMC5.7822(1)250J35(2)
250	160	0.010	PU/J35	5.0	4.0	5.7	2220	20	F125PU103(1)250(2)	SMC5.7103(1)250J35(2)
250	160	0.0010	SL/K33	6.0	3.0	7.3	2824	20	F125SL102(1)250(2)	SMC7.3102(1)250K33(2)
250	160	0.0012	SL/K33	6.0	3.0	7.3	2824	20	F125SL122(1)250(2)	SMC7.3122(1)250K33(2)
250	160	0.0015	SL/K33	6.0	3.0	7.3	2824	20	F125SL152(1)250(2)	SMC7.3152(1)250K33(2)
250	160	0.0018	SL/K33	6.0	3.0	7.3	2824	20	F125SL182(1)250(2)	SMC7.3182(1)250K33(2)
250	160	0.0022	SL/K33	6.0	3.0	7.3	2824	20	F125SL222(1)250(2)	SMC7.3222(1)250K33(2)
250	160	0.0027	SL/K33	6.0	3.0	7.3	2824	20	F125SL272(1)250(2)	SMC7.3272(1)250K33(2)
250	160	0.0033	SL/K33	6.0	3.0	7.3	2824	20	F125SL332(1)250(2)	SMC7.3332(1)250K33(2)
250	160	0.0039	SL/K33	6.0	3.0	7.3	2824	20	F125SL392(1)250(2)	SMC7.3392(1)250K33(2)
250	160	0.0047	SL/K33	6.0	3.0	7.3	2824	20	F125SL472(1)250(2)	SMC7.3472(1)250K33(2)
250	160	0.0056	SL/K33	6.0	3.0	7.3	2824	20	F125SL562(1)250(2)	SMC7.3562(1)250K33(2)
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
250	160	0.0068	SL/K33	6.0	3.0	7.3	2824	20	F125SL682(1)250(2)	SMC7.3682(1)250K33(2)
250	160	0.0082	SL/K33	6.0	3.0	7.3	2824	20	F125SL822(1)250(2)	SMC7.3822(1)250K33(2)
250	160	0.010	SL/K33	6.0	3.0	7.3	2824	20	F125SL103(1)250(2)	SMC7.3103(1)250K33(2)
250	160	0.012	SL/K33	6.0	3.0	7.3	2824	20	F125SL123(1)250(2)	SMC7.3123(1)250K33(2)
250	160	0.015	SL/K33	6.0	3.0	7.3	2824	20	F125SL153(1)250(2)	SMC7.3153(1)250K33(2)
250	160	0.018	SP/K35	6.0	3.5	7.3	2824	20	F125SP183(1)250(2)	SMC7.3183(1)250K35(2)
250	160	0.022	SP/K35	6.0	3.5	7.3	2824	20	F125SP223(1)250(2)	SMC7.3223(1)250K35(2)
250	160	0.010	WP/A31	9.1	5.5	10.2	4036	10	F125WP103(1)250(2)	SMC10.2103(1)250A31(2)
250	160	0.012	WP/A31	9.1	5.5	10.2	4036	10	F125WP123(1)250(2)	SMC10.2123(1)250A31(2)
250	160	0.015	WP/A31	9.1	5.5	10.2	4036	10	F125WP153(1)250(2)	SMC10.2153(1)250A31(2)
250	160	0.018	WP/A31	9.1	5.5	10.2	4036	10	F125WP183(1)250(2)	SMC10.2183(1)250A31(2)
250	160	0.022	WP/A31	9.1	5.5	10.2	4036	10	F125WP223(1)250(2)	SMC10.2223(1)250A31(2)
250	160	0.027	WP/A31	9.1	5.5	10.2	4036	10	F125WP273(1)250(2)	SMC10.2273(1)250A31(2)
250	160	0.033	WP/A31	9.1	5.5	10.2	4036	10	F125WP333(1)250(2)	SMC10.2333(1)250A31(2)
250	160	0.039	WP/A31	9.1	5.5	10.2	4036	10	F125WP393(1)250(2)	SMC10.2393(1)250A31(2)
250	160	0.047	WP/A31	9.1	5.5	10.2	4036	10	F125WP473(1)250(2)	SMC10.2473(1)250A31(2)
250	160	0.056	WP/A31	9.1	5.5	10.2	4036	10	F125WP563(1)250(2)	SMC10.2563(1)250A31(2)
250	160	0.068	WP/A31	9.1	5.5	10.2	4036	10	F125WP683(1)250(2)	SMC10.2683(1)250A31(2)
250	160	0.082	WP/A31	9.1	5.5	10.2	4036	10	F125WP823(1)250(2)	SMC10.2823(1)250A31(2)
250	160	0.10	WP/A31	9.1	5.5	10.2	4036	10	F125WP104(1)250(2)	SMC10.2104(1)250A31(2)
250	160	0.12	YR/B31	11.5	6.5	12.7	5045	8	F125YR124(1)250(2)	SMC12.7124(1)250B31(2)
250	160	0.15	YR/B31	11.5	6.5	12.7	5045	8	F125YR154(1)250(2)	SMC12.7154(1)250B31(2)
250	160	0.18	YR/B31	11.5	6.5	12.7	5045	8	F125YR184(1)250(2)	SMC12.7184(1)250B31(2)
250	160	0.22	ZS/C31	15.0	7.0	16.5	6560	5	F125ZS224(1)250(2)	SMC16.5224(1)250C31(2)
250	160	0.27	ZS/C31	15.0	7.0	16.5	6560	5	F125ZS274(1)250(2)	SMC16.5274(1)250C31(2)
250	160	0.33	ZS/C31	15.0	7.0	16.5	6560	5	F125ZS334(1)250(2)	SMC16.5334(1)250C31(2)
250	160	0.39	ZS/C31	15.0	7.0	16.5	6560	5	F125ZS394(1)250(2)	SMC16.5394(1)250C31(2)
250	160	0.47	ZS/C31	15.0	7.0	16.5	6560	5	F125ZS474(1)250(2)	SMC16.5474(1)250C31(2)
400	200	0.0010	PP/J33	5.0	3.0	5.7	2220	40	F125PP102(1)400(2)	SMC5.7102(1)400J33(2)
400	200	0.0012	PP/J33	5.0	3.0	5.7	2220	40	F125PP122(1)400(2)	SMC5.7122(1)400J33(2)
400	200	0.0015	PP/J33	5.0	3.0	5.7	2220	40	F125PP152(1)400(2)	SMC5.7152(1)400J33(2)
400	200	0.0018	PP/J33	5.0	3.0	5.7	2220	40	F125PP182(1)400(2)	SMC5.7182(1)400J33(2)
400	200	0.0022	PP/J33	5.0	3.0	5.7	2220	40	F125PP222(1)400(2)	SMC5.7222(1)400J33(2)
400	200	0.0027	PU/J35	5.0	4.0	5.7	2220	40	F125PU272(1)400(2)	SMC5.7272(1)400J35(2)
400	200	0.0033	PU/J35	5.0	4.0	5.7	2220	40	F125PU332(1)400(2)	SMC5.7332(1)400J35(2)
400	200	0.0010	SL/K33	6.0	3.0	7.3	2824	25	F125SL102(1)400(2)	SMC7.3102(1)400K33(2)
400	200	0.0012	SL/K33	6.0	3.0	7.3	2824	25	F125SL122(1)400(2)	SMC7.3122(1)400K33(2)
400	200	0.0015	SL/K33	6.0	3.0	7.3	2824	25	F125SL152(1)400(2)	SMC7.3152(1)400K33(2)
400	200	0.0018	SL/K33	6.0	3.0	7.3	2824	25	F125SL182(1)400(2)	SMC7.3182(1)400K33(2)
400	200	0.0022	SL/K33	6.0	3.0	7.3	2824	25	F125SL222(1)400(2)	SMC7.3222(1)400K33(2)
400	200	0.0027	SL/K33	6.0	3.0	7.3	2824	25	F125SL272(1)400(2)	SMC7.3272(1)400K33(2)
400	200	0.0033	SL/K33	6.0	3.0	7.3	2824	25	F125SL332(1)400(2)	SMC7.3332(1)400K33(2)
400	200	0.0039	SL/K33	6.0	3.0	7.3	2824	25	F125SL392(1)400(2)	SMC7.3392(1)400K33(2)
400	200	0.0047	SL/K33	6.0	3.0	7.3	2824	25	F125SL472(1)400(2)	SMC7.3472(1)400K33(2)
400	200	0.0056	SP/K35	6.0	3.5	7.3	2824	25	F125SP562(1)400(2)	SMC7.3562(1)400K35(2)
400	200	0.0068	SP/K35	6.0	3.5	7.3	2824	25	F125SP682(1)400(2)	SMC7.3682(1)400K35(2)
400	200	0.0082	ST/K37	6.0	4.5	7.3	2824	25	F125ST822(1)400(2)	SMC7.3822(1)400K37(2)
400	200	0.010	ST/K37	6.0	4.5	7.3	2824	25	F125ST103(1)400(2)	SMC7.3103(1)400K37(2)
400	200	0.010	WP/A31	9.1	5.5	10.2	4036	15	F125WP103(1)400(2)	SMC10.2103(1)400A31(2)
400	200	0.012	WP/A31	9.1	5.5	10.2	4036	15	F125WP123(1)400(2)	SMC10.2123(1)400A31(2)
400	200	0.015	WP/A31	9.1	5.5	10.2	4036	15	F125WP153(1)400(2)	SMC10.2153(1)400A31(2)
400	200	0.018	WP/A31	9.1	5.5	10.2	4036	15	F125WP183(1)400(2)	SMC10.2183(1)400A31(2)
400	200	0.022	WP/A31	9.1	5.5	10.2	4036	15	F125WP223(1)400(2)	SMC10.2223(1)400A31(2)
400	200	0.027	WP/A31	9.1	5.5	10.2	4036	15	F125WP273(1)400(2)	SMC10.2273(1)400A31(2)
400	200	0.033	WP/A31	9.1	5.5	10.2	4036	15	F125WP333(1)400(2)	SMC10.2333(1)400A31(2)
400	200	0.039	WP/A31	9.1	5.5	10.2	4036	15	F125WP393(1)400(2)	SMC10.2393(1)400A31(2)
400	200	0.047	YR/B31	11.5	6.5	12.7	5045	10	F125YR473(1)400(2)	SMC12.7473(1)400B31(2)
400	200	0.056	YR/B31	11.5	6.5	12.7	5045	10	F125YR563(1)400(2)	SMC12.7563(1)400B31(2)
400	200	0.068	YR/B31	11.5	6.5	12.7	5045	10	F125YR683(1)400(2)	SMC12.7683(1)400B31(2)
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

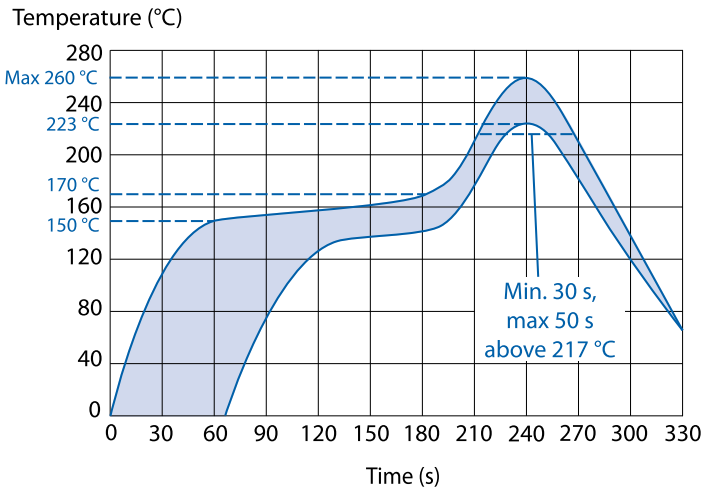
Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
400	200	0.082	YR/B31	11.5	6.5	12.7	5045	10	F125YR823(1)400(2)	SMC12.7823(1)400B31(2)
400	200	0.10	ZS/C31	15.0	7.0	16.5	6560	8	F125ZS104(1)400(2)	SMC16.5104(1)400C31(2)
400	200	0.12	ZS/C31	15.0	7.0	16.5	6560	8	F125ZS124(1)400(2)	SMC16.5124(1)400C31(2)
400	200	0.15	ZS/C31	15.0	7.0	16.5	6560	8	F125ZS154(1)400(2)	SMC16.5154(1)400C31(2)
400	200	0.18	ZS/C31	15.0	7.0	16.5	6560	8	F125ZS184(1)400(2)	SMC16.5184(1)400C31(2)
400	200	0.22	ZS/C31	15.0	7.0	16.5	6560	8	F125ZS224(1)400(2)	SMC16.5224(1)400C31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Soldering Process

Reflow soldering temperature is measured on the top surface of the component: Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 260°C.



Marking

- Capacitance
- Capacitance tolerance code
- Rated voltage code
- Capacitor type S for SMC
- Manufacturing date code

Rated Voltage	Code
50 VDC	Z
100 VDC	D
250 VDC	H
400 VDC	K

Manufacturing Date Code (IEC 60062)			
Y = Year, Z = Month			
Year	**Code**	**Month**	**Code**
2000	M	January	1
2001	N	February	2
2002	P	March	3
2003	R	April	4
2004	S	May	5
2005	T	June	6
2006	U	July	7
2007	V	August	8
2008	W	September	9
2009	X	October	O
2010	A	November	N
2011	B	December	D
2012	C		
2013	D		
2014	E		
2015	F		
2016	H		
2017	J		
2018	K		
2019	L		
2020	M		

Surface Mount Metallized PPS Film Capacitor

SPC Series Encapsulated Double Metallized, Size 2824 – 6560, 100 – 630 VDC

Overview

Film capacitor for surface mounting. Double sided metallized film as electrode. Plain polyphenylene sulfide (PPS) as dielectric. Rugged box encapsulation in self-extinguishing material meeting the requirements of UL 94 V–0. SPC capacitors meet the standards according to IEC 60384-20.

Applications

The SPC Series is designed for high frequency coupling and decoupling as well as general high speed applications requiring high dV/dt such as pulse operation in switched-mode power supply (SMPS). Not suitable for across-the-line application (see suppressor capacitors).

Benefits

- Rated voltage: 100 – 630 VDC
- Rated voltage: 63 – 350 VAC
- Capacitance range: 0.00047 – 0.68 µF
- EIA size: 2824 – 6560
- Capacitance tolerance: ±2%, ±2.5%, ±5%, ±10%
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of −55˚C to +125˚C

Legacy Part Number System

SPC	7.3	471	K	100	K33	TR12
Series	Chip Length (mm)	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Size Code	Packaging
Double Metallized PPS	7.3 10.2 12.7 16.5	First two digits represent significant figures. The third digit specifies number of zeros.	G = ±2% H = ±2.5% J = ±5% K = ±10%	100 250 400 630	See Dimension Table	See Ordering Options Table

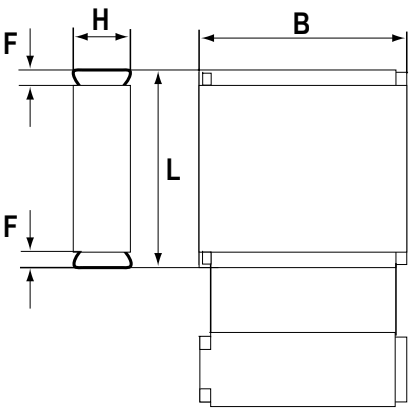
New KEMET Part Number System

F	127	S	L	471	K	100	V
Capacitor Class	Series	Chip Size	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging
F = Film	Double Metallized PPS	S = 2824 W = 4036 Y = 5045 Z = 6560	See Dimension Table	First two digits represent significant figures. The third digit specifies number of zeros.	G = ±2% R = ±2.5% J = ±5% K = ±10%	100 250 400 630	See Ordering Options Table

Ordering Options Table

Chip Size (EIA)	Packaging Type	KEMET Packaging Code	Legacy Packaging Code
2824	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR12
	Bulk (Bag)	A	BULK
4036	**Standard Packaging Options**		
	Tape & Reel (Horizontal Orientation Standard Reel)	V	TR16
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
5045	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24
6560	**Standard Packaging Options**		
	Tape & Reel (Standard Reel)	V	TR24
	Bulk (Bag)	A	BULK
	Other Packaging Options		
	Tape & Reel (Vertical Orientation Standard Reel)	Y	TV44

Dimensions – Millimeters



KEMET Size Code	Legacy Size Code	Chip Size (EIA)	B		H		L		F	
			Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
SL	K33	2824	6.0	+/-0.2	3.0	+/-0.2	7.3	+/-0.2	0.5	Nominal
SP	K35	2824	6.0	+/-0.2	3.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
ST	K37	2824	6.0	+/-0.2	4.5	+/-0.2	7.3	+/-0.2	0.5	Nominal
WP	A31	4036	9.1	+/-0.2	5.5	+/-0.2	10.2	+/-0.2	0.5	Nominal
YR	B31	5045	11.5	+/-0.2	6.5	+/-0.2	12.7	+/-0.2	0.5	Nominal
ZS	C31	6560	15	+/-0.2	7.0	+/-0.2	16.5	+/-0.2	0.5	Nominal

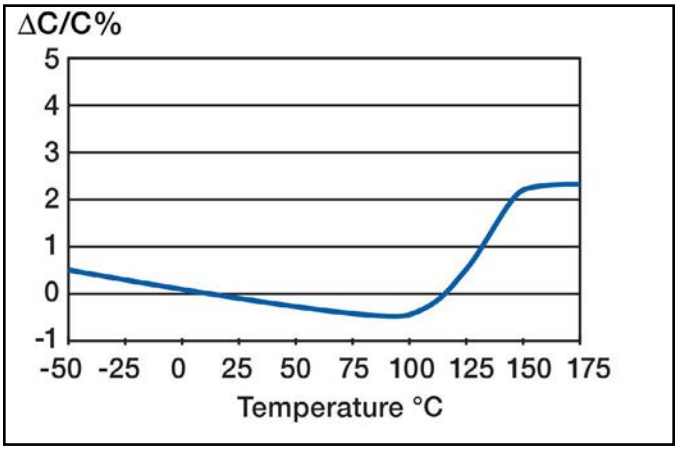
Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

Performance Characteristics

Rated Voltage (VDC)	100	250	400	630
Rated Voltage (VAC)	63	160	250	350
Capacitance Range (µF)	0.00047 – 0.68	0.00047 – 0.33	0.00047 – 0.15	0.00047 – 0.10
Chip Size (EIA)	2824 – 6560			
Capacitance Tolerance	±2%, ±2.5%, ±5%, ±10%			
Category Temperature Range	−55°C to +125°C			
Rated Temperature	+100°C			
Voltage Derating	The rated voltage should be decreased with 1.25%/°C from +100°C to +125°C and 1.5%/°C from +125°C to 175°C			
Climatic Category	55/125/56			
Test Voltage	1.6 x V_R, 60 seconds			
Insulation Resistance	Measured at +20°C According to IEC 60384–19			
	Minimum Value Between Terminals			
			C ≤ 0.33 µF	C > 0.33 µF
	V_R ≤ 100		50,000 MΩ	16,500 MΩ • µF
	V_R > 100		100,000 MΩ	
Dissipation Factor	Maximum Values at +23°C			
			C ≤ 0.1 µF	0.1 < C < 0.68 µF
	1 kHz		0.10%	0.10%
	10 kHz		0.15%	0.15%
	100 kHz		0.20%	0.40%
Pulse Rise Time	The capacitors can withstand an unlimited number of pulses with a dV/dt according to Table 1. For voltages (V) lower than the rated voltage (V_R), the specified dV/dt can be multiplied by V_R/V.			

Capacitance vs. Temperature



Dissipation Factor vs. Temperature

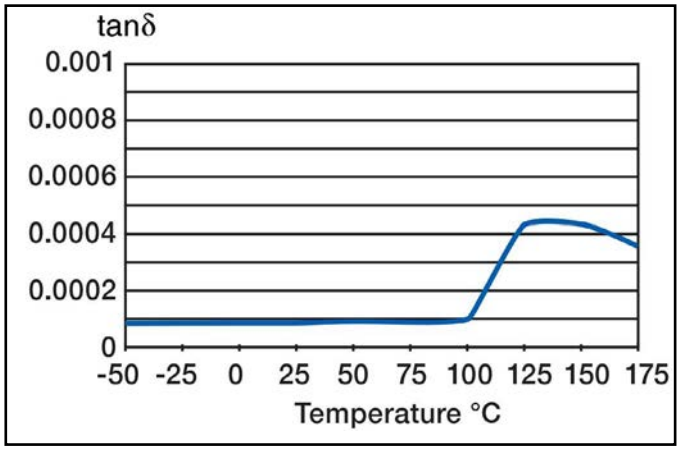


Table 1 – Ratings & Part Number Reference

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
100	63	0.00047	SL/K33	6.0	3.0	7.3	2824	800	F127SL471(1)100(2)	SPC7.3471(1)100K33(2)
100	63	0.00068	SL/K33	6.0	3.0	7.3	2824	800	F127SL681(1)100(2)	SPC7.3681(1)100K33(2)
100	63	0.0010	SL/K33	6.0	3.0	7.3	2824	800	F127SL102(1)100(2)	SPC7.3102(1)100K33(2)
100	63	0.0015	SL/K33	6.0	3.0	7.3	2824	800	F127SL152(1)100(2)	SPC7.3152(1)100K33(2)
100	63	0.0022	SL/K33	6.0	3.0	7.3	2824	800	F127SL222(1)100(2)	SPC7.3222(1)100K33(2)
100	63	0.0033	SL/K33	6.0	3.0	7.3	2824	800	F127SL332(1)100(2)	SPC7.3332(1)100K33(2)
100	63	0.0047	SL/K33	6.0	3.0	7.3	2824	800	F127SL472(1)100(2)	SPC7.3472(1)100K33(2)
100	63	0.0068	SL/K33	6.0	3.0	7.3	2824	800	F127SL682(1)100(2)	SPC7.3682(1)100K33(2)
100	63	0.010	SL/K33	6.0	3.0	7.3	2824	800	F127SL103(1)100(2)	SPC7.3103(1)100K33(2)
100	63	0.015	SL/K33	6.0	3.0	7.3	2824	800	F127SL153(1)100(2)	SPC7.3153(1)100K33(2)
100	63	0.022	SP/K35	6.0	3.5	7.3	2824	800	F127SP223(1)100(2)	SPC7.3223(1)100K35(2)
100	63	0.033	ST/K37	6.0	4.5	7.3	2824	800	F127ST333(1)100(2)	SPC7.3333(1)100K37(2)
100	63	0.0068	WP/A31	9.1	5.5	10.2	4036	600	F127WP682(1)100(2)	SPC10.2682(1)100A31(2)
100	63	0.010	WP/A31	9.1	5.5	10.2	4036	600	F127WP103(1)100(2)	SPC10.2103(1)100A31(2)
100	63	0.015	WP/A31	9.1	5.5	10.2	4036	600	F127WP153(1)100(2)	SPC10.2153(1)100A31(2)
100	63	0.022	WP/A31	9.1	5.5	10.2	4036	600	F127WP223(1)100(2)	SPC10.2223(1)100A31(2)
100	63	0.033	WP/A31	9.1	5.5	10.2	4036	600	F127WP333(1)100(2)	SPC10.2333(1)100A31(2)
100	63	0.047	WP/A31	9.1	5.5	10.2	4036	600	F127WP473(1)100(2)	SPC10.2473(1)100A31(2)
100	63	0.068	WP/A31	9.1	5.5	10.2	4036	600	F127WP683(1)100(2)	SPC10.2683(1)100A31(2)
100	63	0.10	WP/A31	9.1	5.5	10.2	4036	600	F127WP104(1)100(2)	SPC10.2104(1)100A31(2)
100	63	0.15	YR/B31	11.5	6.5	12.7	5045	400	F127YR154(1)100(2)	SPC12.7154(1)100B31(2)
100	63	0.22	YR/B31	11.5	6.5	12.7	5045	400	F127YR224(1)100(2)	SPC12.7224(1)100B31(2)
100	63	0.33	ZS/C31	15.0	7.0	16.5	6560	150	F127ZS334(1)100(2)	SPC16.5334(1)100C31(2)
100	63	0.47	ZS/C31	15.0	7.0	16.5	6560	150	F127ZS474(1)100(2)	SPC16.5474(1)100C31(2)
100	63	0.68	ZS/C31	15.0	7.0	16.5	6560	150	F127ZS684(1)100(2)	SPC16.5684(1)100C31(2)
250	160	0.00047	SL/K33	6.0	3.0	7.3	2824	1200	F127SL471(1)250(2)	SPC7.3471(1)250K33(2)
250	160	0.00068	SL/K33	6.0	3.0	7.3	2824	1200	F127SL681(1)250(2)	SPC7.3681(1)250K33(2)
250	160	0.0010	SL/K33	6.0	3.0	7.3	2824	1200	F127SL102(1)250(2)	SPC7.3102(1)250K33(2)
250	160	0.0015	SL/K33	6.0	3.0	7.3	2824	1200	F127SL152(1)250(2)	SPC7.3152(1)250K33(2)
250	160	0.0022	SL/K33	6.0	3.0	7.3	2824	1200	F127SL222(1)250(2)	SPC7.3222(1)250K33(2)
250	160	0.0033	SL/K33	6.0	3.0	7.3	2824	1200	F127SL332(1)250(2)	SPC7.3332(1)250K33(2)
250	160	0.0047	SL/K33	6.0	3.0	7.3	2824	1200	F127SL472(1)250(2)	SPC7.3472(1)250K33(2)
250	160	0.0068	SL/K33	6.0	3.0	7.3	2824	1200	F127SL682(1)250(2)	SPC7.3682(1)250K33(2)
250	160	0.010	SP/K35	6.0	3.5	7.3	2824	1200	F127SP103(1)250(2)	SPC7.3103(1)250K35(2)
250	160	0.015	ST/K37	6.0	4.5	7.3	2824	1200	F127ST153(1)250(2)	SPC7.3153(1)250K37(2)
250	160	0.0068	WP/A31	9.1	5.5	10.2	4036	1000	F127WP682(1)250(2)	SPC10.2682(1)250A31(2)
250	160	0.010	WP/A31	9.1	5.5	10.2	4036	1000	F127WP103(1)250(2)	SPC10.2103(1)250A31(2)
250	160	0.015	WP/A31	9.1	5.5	10.2	4036	1000	F127WP153(1)250(2)	SPC10.2153(1)250A31(2)
250	160	0.022	WP/A31	9.1	5.5	10.2	4036	1000	F127WP223(1)250(2)	SPC10.2223(1)250A31(2)
250	160	0.033	WP/A31	9.1	5.5	10.2	4036	1000	F127WP333(1)250(2)	SPC10.2333(1)250A31(2)
250	160	0.047	WP/A31	9.1	5.5	10.2	4036	1000	F127WP473(1)250(2)	SPC10.2473(1)250A31(2)
250	160	0.068	YR/B31	11.5	6.5	12.7	5045	700	F127YR683(1)250(2)	SPC12.7683(1)250B31(2)
250	160	0.10	YR/B31	11.5	6.5	12.7	5045	700	F127YR104(1)250(2)	SPC12.7104(1)250B31(2)
250	160	0.15	ZS/C31	15.0	7.0	16.5	6560	350	F127ZS154(1)250(2)	SPC16.5154(1)250C31(2)
250	160	0.22	ZS/C31	15.0	7.0	16.5	6560	350	F127ZS224(1)250(2)	SPC16.5224(1)250C31(2)
250	160	0.33	ZS/C31	15.0	7.0	16.5	6560	350	F127ZS334(1)250(2)	SPC16.5334(1)250C31(2)
400	250	0.00047	SL/K33	6.0	3.0	7.3	2824	1600	F127SL471(1)400(2)	SPC7.3471(1)400K33(2)
400	250	0.00068	SL/K33	6.0	3.0	7.3	2824	1600	F127SL681(1)400(2)	SPC7.3681(1)400K33(2)
400	250	0.0010	SL/K33	6.0	3.0	7.3	2824	1600	F127SL102(1)400(2)	SPC7.3102(1)400K33(2)
400	250	0.0015	SL/K33	6.0	3.0	7.3	2824	1600	F127SL152(1)400(2)	SPC7.3152(1)400K33(2)
400	250	0.0022	SL/K33	6.0	3.0	7.3	2824	1600	F127SL222(1)400(2)	SPC7.3222(1)400K33(2)
400	250	0.0033	SL/K33	6.0	3.0	7.3	2824	1600	F127SL332(1)400(2)	SPC7.3332(1)400K33(2)
400	250	0.0047	SP/K35	6.0	3.5	7.3	2824	1600	F127SP472(1)400(2)	SPC7.3472(1)400K35(2)
400	250	0.0068	ST/K37	6.0	4.5	7.3	2824	1600	F127ST682(1)400(2)	SPC7.3682(1)400K37(2)
400	250	0.0068	WP/A31	9.1	5.5	10.2	4036	1300	F127WP682(1)400(2)	SPC10.2682(1)400A31(2)
400	250	0.010	WP/A31	9.1	5.5	10.2	4036	1300	F127WP103(1)400(2)	SPC10.2103(1)400A31(2)
400	250	0.015	WP/A31	9.1	5.5	10.2	4036	1300	F127WP153(1)400(2)	SPC10.2153(1)400A31(2)
400	250	0.022	WP/A31	9.1	5.5	10.2	4036	1300	F127WP223(1)400(2)	SPC10.2223(1)400A31(2)
400	250	0.033	YR/B31	11.5	6.5	12.7	5045	900	F127YR333(1)400(2)	SPC12.7333(1)400B31(2)
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%, K = ±10%.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

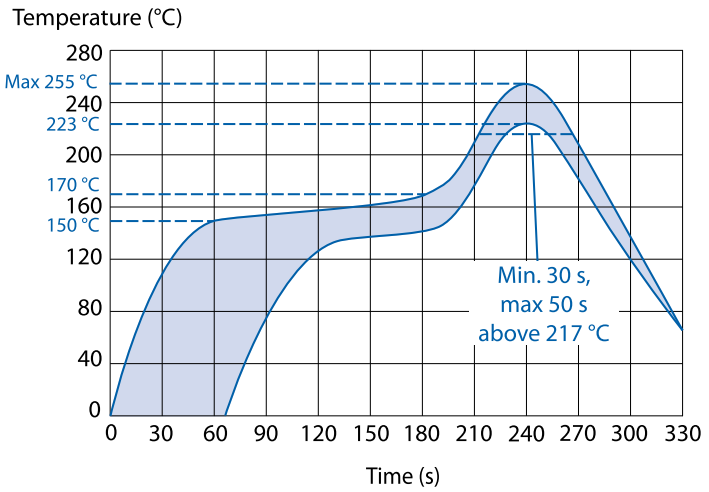
Table 1 – Ratings & Part Number Reference cont'd

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
400	250	0.047	YR/B31	11.5	6.5	12.7	5045	900	F127YR473(1)400(2)	SPC12.7473(1)400B31(2)
400	250	0.068	ZS/C31	15.0	7.0	16.5	6560	450	F127ZS683(1)400(2)	SPC16.5683(1)400C31(2)
400	250	0.10	ZS/C31	15.0	7.0	16.5	6560	450	F127ZS104(1)400(2)	SPC16.5104(1)400C31(2)
400	250	0.15	ZS/C31	15.0	7.0	16.5	6560	450	F127ZS154(1)400(2)	SPC16.5154(1)400C31(2)
630	350	0.00047	SL/K33	6.0	3.0	7.3	2824	2000	F127SL471(1)630(2)	SPC7.3471(1)630K33(2)
630	350	0.00068	SL/K33	6.0	3.0	7.3	2824	2000	F127SL681(1)630(2)	SPC7.3681(1)630K33(2)
630	350	0.0010	SL/K33	6.0	3.0	7.3	2824	2000	F127SL102(1)630(2)	SPC7.3102(1)630K33(2)
630	350	0.0015	SL/K33	6.0	3.0	7.3	2824	2000	F127SL152(1)630(2)	SPC7.3152(1)630K33(2)
630	350	0.0022	SL/K33	6.0	3.0	7.3	2824	2000	F127SL222(1)630(2)	SPC7.3222(1)630K33(2)
630	350	0.0033	SP/K35	6.0	3.5	7.3	2824	2000	F127SP332(1)630(2)	SPC7.3332(1)630K35(2)
630	350	0.0047	ST/K37	6.0	4.5	7.3	2824	2000	F127ST472(1)630(2)	SPC7.3472(1)630K37(2)
630	350	0.0068	WP/A31	9.1	5.5	10.2	4036	1600	F127WP682(1)630(2)	SPC10.2682(1)630A31(2)
630	350	0.010	WP/A31	9.1	5.5	10.2	4036	1600	F127WP103(1)630(2)	SPC10.2103(1)630A31(2)
630	350	0.015	WP/A31	9.1	5.5	10.2	4036	1600	F127WP153(1)630(2)	SPC10.2153(1)630A31(2)
630	350	0.022	YR/B31	11.5	6.5	12.7	5045	1100	F127YR223(1)630(2)	SPC12.7223(1)630B31(2)
630	350	0.033	YR/B31	11.5	6.5	12.7	5045	1100	F127YR333(1)630(2)	SPC12.7333(1)630B31(2)
630	350	0.047	ZS/C31	15.0	7.0	16.5	6560	550	F127ZS473(1)630(2)	SPC16.5473(1)630C31(2)
630	350	0.068	ZS/C31	15.0	7.0	16.5	6560	550	F127ZS683(1)630(2)	SPC16.5683(1)630C31(2)
630	350	0.10	ZS/C31	15.0	7.0	16.5	6560	550	F127ZS104(1)630(2)	SPC16.5104(1)630C31(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code (New/Legacy)**	**B (mm)**	**H (mm)**	**L (mm)**	**Chip Size**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%, K = ±10%.
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

Soldering Process

Reflow soldering temperature is measured on the top surface of the component: Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 260°C.



Marking

- Capacitance
- Capacitance tolerance code
- Rated voltage code
- Capacitor type D for SPC
- Manufacturing date code

Rated Voltage	Code
100 VDC	D
250 VDC	H
400 VDC	K
630 VDC	M

Manufacturing Date Code (IEC 60062)			
Y = Year, Z = Month			
Year	**Code**	**Month**	**Code**
2000	M	January	1
2001	N	February	2
2002	P	March	3
2003	R	April	4
2004	S	May	5
2005	T	June	6
2006	U	July	7
2007	V	August	8
2008	W	September	9
2009	X	October	O
2010	A	November	N
2011	B	December	D
2012	C		
2013	D		
2014	E		
2015	F		
2016	H		
2017	J		
2018	K		
2019	L		
2020	M		

SMP253 Series Metallized Impregnated Paper, Class Y2, 250 VAC, Surface Mount Device

Overview

The SMP253 Series is constructed of multilayer metallized paper, encapsulated and impregnated in self-extinguishing material meeting the requirements of UL 94 V–0.

Applications

Typical applications include worldwide use as electromagnetic interference suppressor in all Y2 applications, line-to-earth.

Benefits

- Approvals: ENEC, UL, CSA
- Rated voltage: 250 VAC 50/60 Hz
- Capacitance range: 0.001 – 0.0047 µF
- Size code: 5045, 12.7 mm
- Capacitance tolerance: ±20%
- Climatic category: 40/100/56/B, IEC 60068–1
- Tape and reel packaging in accordance with IEC 60286–3
- RoHS Compliant and lead-free terminations
- Operating temperature range of -40˚C to +100˚C
- 100% screening factory test at 3,000 VDC
- Highest possible safety regarding active and passive flammability
- Excellent self-healing properties ensure long life even when subjected to frequent over voltages
- Good resistance to ionization due to impregnated dielectric
- High dV/dt capability
- Impregnated paper ensures excellent stability and reliability properties, particularly in applications with continuous operation

Legacy Part Number System

SMP253	M	A	4100	M	TR24
Series	Rated Voltage (VAC)	Chip Length (mm)	Capacitance Code (pF)	Capacitance Tolerance	Packaging
Y2, Metallized Paper	M = 250	A = 12.7	The last three digits represent significant figures. The first digit specifies the total number of digits.	M = ±20%	See Ordering Options Table

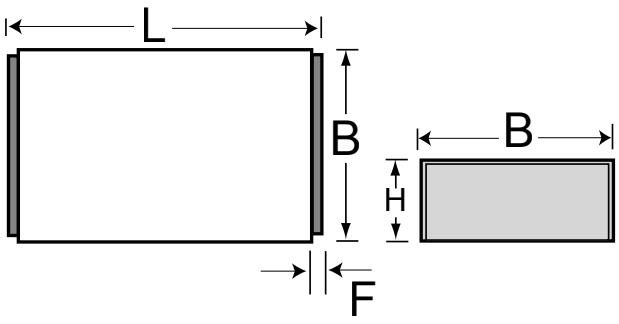
New KEMET Part Number System

P	101	AA	102	M	250	V
Capacitor Class	Series	Chip Size	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VAC)	Packaging
P = Paper	Y2, Metallized Paper	See Dimension Table	First two digits represent significant figures. Third digit specifies number of zeros.	M = ±20%	250 = 250	See Ordering Options Table

Ordering Options Table

Packaging Type	KEMET Lead and Packaging Code	Legacy Lead and Packaging Code
Standard Lead and Packaging Options		
Tape & Reel (Standard Reel)	V	TR24
Bulk (Bag)	A	BULK
Other Lead and Packaging Options		
Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24

Dimensions – Millimeters



Chip Size	B		H		L		F	
EIA	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
5045	11.5	+/-0.2	6.5	+/-0.2	12.7	+/-0.2	0.5	Nominal

Performance Characteristics

Rated Voltage	250 VAC 50/60 Hz	
Capacitance Range	0.001 – 0.0047 µF	
Capacitance Tolerance	±20%	
Temperature Range	-40°C to +100°C	
Climatic Category	40/100/56/B	
Approvals	S, UL, CSA	
Dissipation Factor	Maximum Values at +23°C	
	1 kHz	1.3%
Test Voltage Between Terminals	The 100% screening factory test is carried out at 3,000 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. It is not permitted to repeat this test as there is a risk to damage the capacitor. KEMET is not liable in such case for any failures.	
Insulation Resistance	Minimum Value Between Terminals	
	≥ 12,000 MΩ	

Environmental Test Data

Test	IEC Publication	Procedure
Vibration	IEC 60068–2–6 Test Fc	3 directions at 2 hours each 10 – 500 Hz at 0.75 mm or 98 m/s^2
Active Flammability	IEC 60384–14	
Passive Flammability	IEC 60384–14	Needle-flame test
Humidity	IEC 60068–2–3 Test Ca	+40°C and 90 – 95% RH

Approvals

Mark	Specification	File Number
	EN/IEC 60384–14	Pending
	UL 60384 and CAN/CSA E60384-14:09	Pending

Environmental Compliance

All KEMET EMI capacitors are RoHS Compliant.

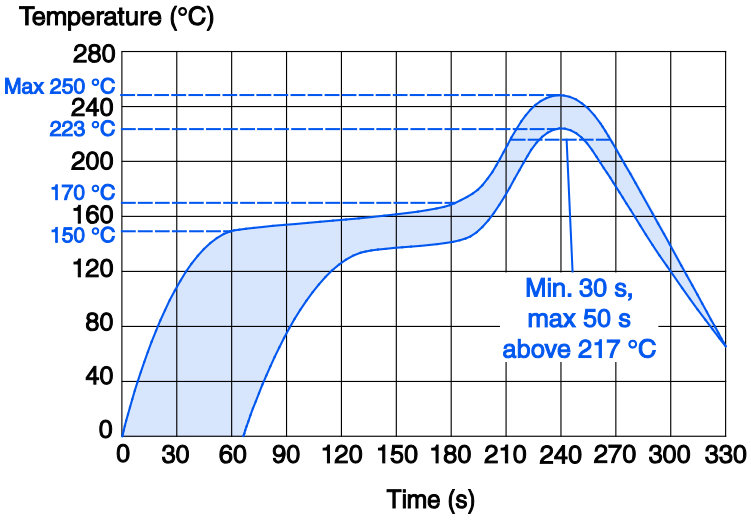
Table 1 – Ratings & Part Number Reference

Capacitance Value (µF)	Maximum Dimensions in mm			dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
	B	H	L			
0.0010	11.5	6.5	12.7	2000	P101AA102M250(1)	SMP253MA4100M(1)
0.0015	11.5	6.5	12.7	2000	P101AA152M250(1)	SMP253MA4150M(1)
0.0022	11.5	6.5	12.7	2000	P101AA222M250(1)	SMP253MA4220M(1)
0.0025	11.5	6.5	12.7	2000	P101AA252M250(1)	SMP253MA4250M(1)
0.0033	11.5	6.5	12.7	2000	P101AA332M250(1)	SMP253MA4330M(1)
0.0039	11.5	6.5	12.7	2000	P101AA392M250(1)	SMP253MA4390M(1)
0.0047	11.5	6.5	12.7	2000	P101AA472M250(1)	SMP253MA4470M(1)
Capacitance Value (µF)	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µs)**	**New KEMET Part Number**	**Legacy Part Number**

(1) Insert packaging code. See Ordering Options Table for available options.

Soldering Process

Reflow soldering temperature shall be measured on the top body surface of the component. The profiles herewith are recommended soldering profiles for convection reflow ovens and IR reflow ovens. If vapor phase reflow oven is used, please consult KEMET. Exceeding the manufacturer's process recommendations may harm the component. KEMET is not liable for any defect caused by exceeding recommendations. According to international standards, the maximum temperature capability shall be measured on the top surface of a component. The international standards do not define how the thermocouple should be fastened on the component. Our recommendation for attaching the thermocouple on the top surface of the component is to glue it with high temperature resistant glue.



Marking

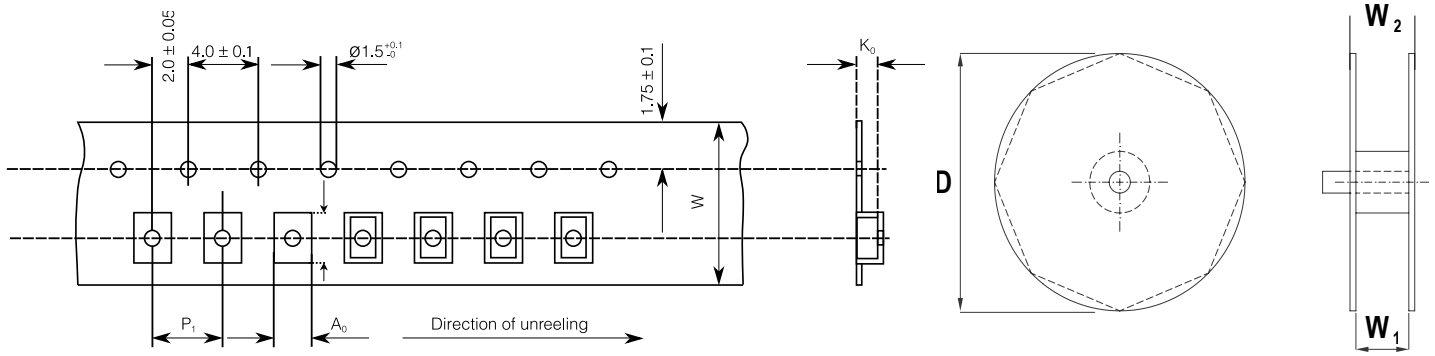
- KEMET's logo
- Series
- Capacitance
- Rated voltage
- Capacitor class
- Manufacturing date code

Packaging Quantities

Chip Size EIA	Thickness (mm)	Height (mm)	Length (mm)	Standard Reel ø 330 mm	
				Horizontal Orientation	Vertical Orientation
5045	11.5	6.5	12.7	600	400

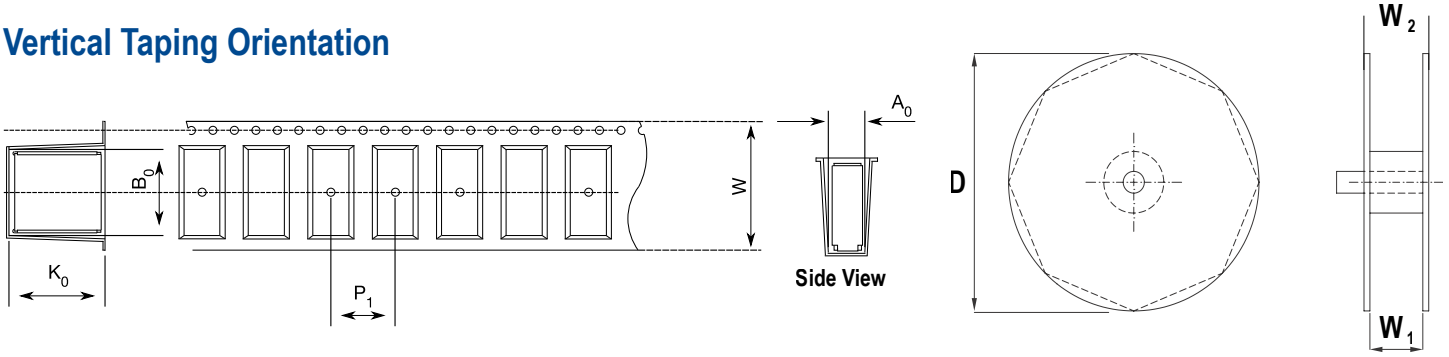
Carrier Taping & Packaging (IEC 60286–2)

Horizontal Taping Orientation



EIA Size Code Horizontal Mounting	Dimensions in mm			Taping Specification							
	B	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
	Nominal	Nominal	Nominal	-0/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
5045	11.5	6.5	12.7	24.0	16.0	11.9	13.1	6.8	330	24.4	30.0

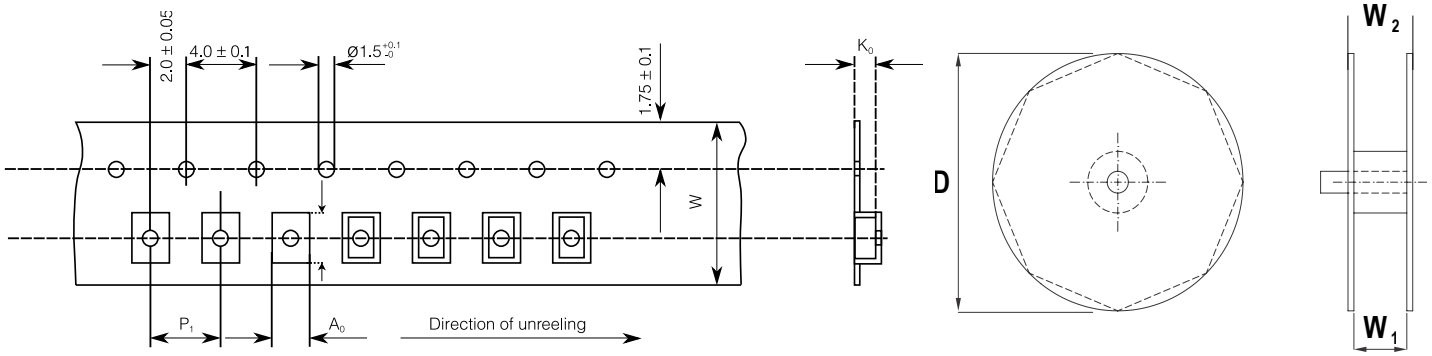
Vertical Taping Orientation



EIA Size Code Vertical Mounting	Dimensions in mm			Taping Specification							
	B	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
	Nominal	Nominal	Nominal	-0/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
5026 (5045)	12.7	6.5	11.5	24.0	16.0	6.9	13.1	11.8	330	24.4	30.0

Carrier Taping & Packaging for MMC, GMC, GPC, SMC & SPC (IEC 60286–2)

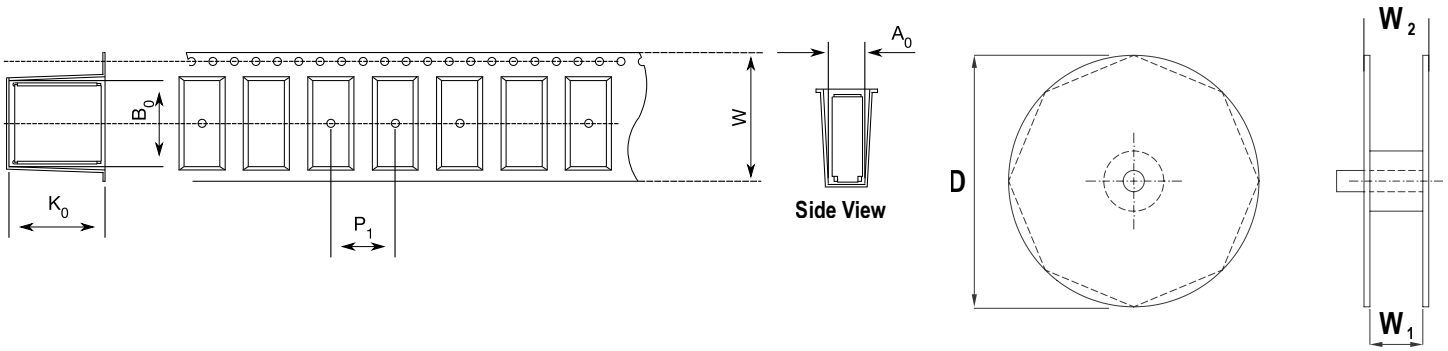
Horizontal Taping Orientation



EIA Size Code Horizontal Mounting	Dimensions in mm			Taping Specification							
	B	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
	Nominal	Nominal	Nominal	-0/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
2220	5.0	2.5	5.7	12.0	8.0	5.5	6.0	2.8	330	12.4	22.0
2220	5.0	3.0	5.7	12.0	8.0	5.5	6.0	3.3	330	12.4	22.0
2220	5.0	4.0	5.7	12.0	8.0	5.5	6.0	4.3	330	12.4	22.0
2824	6.0	2.5	7.3	12.0	8.0	6.5	7.5	2.8	330	12.4	22.0
2824	6.0	3.0	7.3	12.0	8.0	6.5	7.5	3.3	330	12.4	22.0
2824	6.0	3.5	7.3	12.0	8.0	6.5	7.5	3.8	330	12.4	22.0
2824	6.0	4.5	7.3	12.0	8.0	6.5	7.5	4.8	330	12.4	22.0
4036	9.1	5.5	10.2	16.0	16.0	9.5	10.5	5.8	330	16.4	22.0
5045	11.5	6.5	12.7	24.0	16.0	11.9	13.1	6.8	330	24.4	30.0
6560	15.0	7.0	16.5	24.0	20.0	15.4	16.8	7.3	330	24.4	30.0

Carrier Taping & Packaging for MMC, GMC, GPC, SMC & SPC (IEC 60286–2) cont'd

Vertical Taping Orientation



Size Code Vertical Mounting	Dimensions in mm			Taping Specification							
	B	H	L	W	P_1	A_0	B_0	K_0	D	W_1	W_2
	Nominal	Nominal	Nominal	-0/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
4022	5.5	9.1	10.2	24.0	16.0	6.0	10.5	9.3	330	24.4	30.0
5026	6.5	11.5	12.7	24.0	16.0	6.9	13.1	11.8	330	24.4	30.0
6528	7.0	15.0	16.5	44.0	20.0	7.5	17.0	15.3	330	44.5	49.5
Note: Chip dimensions B and H correspond to dimensions H and B in the horizontal mounting table.											

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