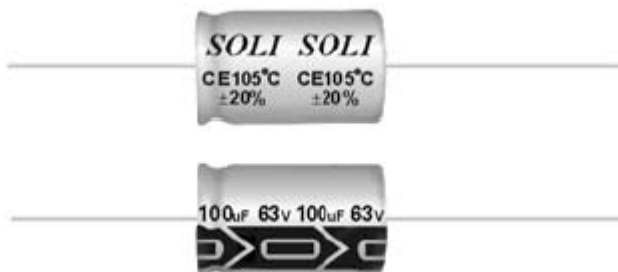


105° General Purpose Axial Capacitors



Features:

- 105°C, 1000 hours assured
- Wide operating temperature range, from -40°C to +105°C
- Excellent temperature performance
- Suitable to use for industrial equipment.

Specifications:

Items	Performance																																								
Operating Temperature Range	-40°C to +105°C																																								
Capacitance Tolerance	±10%, ±20% (at 20°C, 120Hz)																																								
Leakage Current	$I = 0.02CV$ or $3 (\mu A)$ whichever is greater (after 2 minutes applying the rated DC working voltage at 20°C) Where: C = rated capacitance in μF . V = Rated DC working voltage in V.																																								
Dissipation Factor (Tan δ at 20°C, 120 Hz)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.09</td> <td>0.08</td> </tr> </tbody> </table> <p>For capacitors whose capacitance exceeds 1000mF, the specification of Tan δ should be increased by 0.02 for every addition of 1000 μF.</p>	Rated voltage (V)	10	16	25	35	63	100	Tan δ	0.20	0.17	0.15	0.12	0.09	0.08																										
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Low Temperature Characteristics	<p>Impedance ratio at 120Hz.</p> <table border="1"> <thead> <tr> <th colspan="2">Rated voltage (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Z (-25°C)</td> <td>$\varnothing D < 16$</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>/Z (-20°C)</td> <td>$\varnothing D \geq 16$</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z (-40°C)</td> <td>$\varnothing D < 16$</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td>/Z (+20°C)</td> <td>$\varnothing D \geq 16$</td> <td>16</td> <td>12</td> <td>10</td> <td>8</td> <td>6</td> <td>6</td> </tr> </tbody> </table>	Rated voltage (V)		10	16	25	35	63	100	Z (-25°C)	$\varnothing D < 16$	4	3	3	2	2	2	/Z (-20°C)	$\varnothing D \geq 16$	6	4	4	3	3	3	Z (-40°C)	$\varnothing D < 16$	8	6	6	4	3	3	/Z (+20°C)	$\varnothing D \geq 16$	16	12	10	8	6	6
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Load Life Test	<p>After 1000 hours application of rated voltage at 105°C, capacitors meet the characteristics requirements listed as below</p> <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table>	Capacitance Change	Within ±20% of initial value	Dissipation Factor	Less than 200% of specified value	Leakage Current	Within specified value																																		
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Shelf Life Test	After leaving capacitors under no load at 105°C for 1000 hours they meet the specified value for load life characteristics listed above.																																								

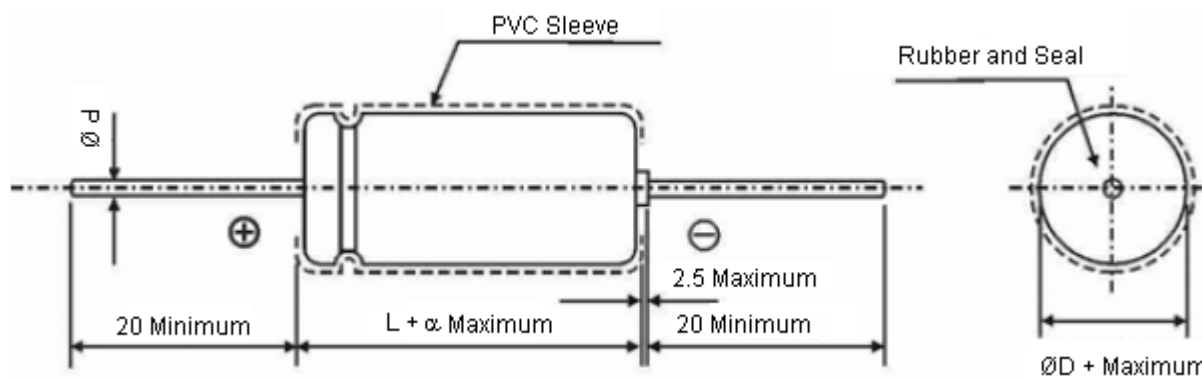
105° General Purpose Axial Capacitors



Specifications:

Items	Performance						
Frequency Coefficient of Allowable Ripple Current	Freq. (Hz)		60	120	500	1K	10K up
	Cap. (μF)						
	Under 100		0.70	1.00	1.30	1.40	1.50
	100 to 1000		0.75		1.20	1.30	1.35
1000 up above		0.80	1.10		1.12	1.15	
Allowable Ripple Current Vs. Ambient Temperature	Temperature (°C)		Under 50	70	85	105	
	Multiplier		1.95	1.78	1.40	1.00	
Marking	Printed with white colour letter on black sleeve						
Other Standards	Satisfies Characteristic W of JIS C 5101-4						

Diagram of Dimensions



Lead Diameter

ØD	5	6.3	8	10	13	16	18	22	25
Ød	0.6					0.8			
α	1.5			2.0					
β	0.5			1.0					

Dimension : Diameter (ØD) x Length (L) mm
 Ripple Current: mA/rms at 105°C, 120Hz

105° General Purpose Axial Capacitors



Dimension and Permissible Ripple Current

μF	V.DC Contents	10V (1A)		16V (1C)		25V (1E)		35V (1V)		63V (1J)		100V (2A)	
		ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
0.10	0R1									5x12	3	5x12	3
0.22	R22										4.5		5
0.33	R33										7.5		8
0.47	R47										9		9
1.0	010										15		15
2.2	2R2										30		30
3.3	3R3										32		32
4.7	4R7										36		37
10	100			5x12	35	5x12	39	5x12	44	6.3x13	55	6.3x13	64
22	220		55		63		6.3x13	65	90		8x16		106
33	330	5x12	60		73			75	96		8x13		123
47	470		77	6.3x13	85	6.3x13	90	6.3x13	114	8x16	162	10x21	180
100	101	6.3x13	110		145	8x13	166		8x16	180	10x17	248	13x22
220	221	8x13	180	8x13	231	8x16	246	10x17	305	13x22	420	16x28	458
330	331	8x16	253	8x16	323	10x17	345	10x21	391		495	16x33	582
470	471		302	10x17	359	10x21	432	13x22	490		13x27	632	16x36
1000	102	10x17	486	10x21	569	13x22	662	13x27	721	16x36	984	18x42	1096
2200	222	13x22	793	13x24	926	16x28	1024	16x33	1177	22x43	1540	25x52	2310
3300	332	13x27	1015	16x28	1173	16x33	1300	18x36	1449	25x52	1950		
4700	472	16x28	1252	16x23	1443	18x36	1638	22x43	1878		2290		

105° General Purpose Axial Capacitors



Part Number Table

Description	Part Number
Capacitor, Axial, 10V, 220UF	MCTG-221M1AB-0813P
Capacitor, Axial, 10V, 1000UF	MCTG-102M1AB-1017P
Capacitor, Axial, 10V, 2200UF	MCTG-222M1AB-1322P
Capacitor, Axial, 16V, 100UF	MCTG-101M1CB-0613P
Capacitor, Axial, 16V, 220UF	MCTG-221M1CB-0813P
Capacitor, Axial, 16V, 470UF	MCTG-471M1CB-0816P
Capacitor, Axial, 16V, 1000UF	MCTG--102M1CB-1021P
Capacitor, Axial, 16V, 2200UF	MCTG--222M1CB-1324P
Capacitor, Axial, 16V, 4700UF	MCTG--472M1CB-1633P
Capacitor, Axial, 25V, 10UF	MCTG--100M1EB-0512P
Capacitor, Axial, 25V, 22UF	MCTG--220M1EB-0512P
Capacitor, Axial, 25V, 47UF	MCTG--470M1EB-0613P
Capacitor, Axial, 25V, 100UF	MCTG-101M1EB-0813P
Capacitor, Axial, 25V, 220UF	MCTG-221M1EB-0816P
Capacitor, Axial, 25V, 470UF	MCTG-471M1EB-1021P
Capacitor, Axial, 25V, 1000UF	MCTG-102M1EB-1322P
Capacitor, Axial, 25V, 2200UF	MCTG-222M1EB-1628P
Capacitor, Axial, 25V, 4700UF	MCTG-472M1EB-1836P
Capacitor, Axial, 35V, 10UF	MCTG-100M1VB-0512P
Capacitor, Axial, 35V, 47UF	MCTG-470M1VB-0613P
Capacitor, Axial, 35V, 100UF	MCTG-101M1VB-0816P
Capacitor, Axial, 35V, 220UF	MCTG-221M1VB-1017P
Capacitor, Axial, 35V, 470UF	MCTG-471M1VB-1322P
Capacitor, Axial, 35V, 1000UF	MCTG-102M1VB-1327P
Capacitor, Axial, 35V, 2200UF	MCTG-222M1VB-1636P
Capacitor, Axial, 35V, 4700UF	MCTG-472M1VB-2243P
Capacitor, Axial, 63V, 10UF	MCTG-100M1JB-0613P
Capacitor, Axial, 63V, 22UF	MCTG-220M1JB-0613P
Capacitor, Axial, 63V, 47UF	MCTG-470M1JB-0816P
Capacitor, Axial, 63V, 100UF	MCTG-101M1JB-1017P
Capacitor, Axial, 63V, 220UF	MCTG-221M1JB-1322P
Capacitor, Axial, 63V, 470UF	MCTG-471M1JB-1327P
Capacitor, Axial, 63V, 1000UF	MCTG-102M1JB-1633P
Capacitor, Axial, 63V, 2200UF	MCTG-222M1JB-2043P

105° General Purpose Axial Capacitors



Part Number Table

Description	Part Number
Capacitor, Axial, 100V, 1UF	MCTG-010M2AB-0512P
Capacitor, Axial, 100V, 2.2UF	MCTG-2R2M2AB-0512P
Capacitor, Axial, 100V, 4.7UF	MCTG-4R7M2AB-0613P
Capacitor, Axial, 100V, 10UF	MCTG-100M2AB-0613P
Capacitor, Axial, 100V, 22UF	MCTG-220M2AB-0816P
Capacitor, Axial, 100V, 47UF	MCTG-470M2AB-1021P
Capacitor, Axial, 100V, 100UF	MCTG-101M2AB-1322P

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