

Surface Mount Type

Series: **TQ** Type: **V**

TQ High temperature Lead-Free reflow(suffix:A*)



■ Features

- 1 size smaller and same performance compare with V-TK series
- Low ESR
(85% low ESR in low temperature after endurance compare with V-TP series)
- Endurance: 2000 h at 125 °C
- AEC-Q200 qualified*
- RoHS directive compliant

■ Recommended Applications

- Automotive

■ Specifications

Category Temp. Range	-40 °C to +125 °C		
Rated W.V.Range	35 V.DC		
Nominal Cap.Range	47 µF to 100 µF		
Capacitance Tolerance	±20 % (120 Hz/+20 °C)		
DC Leakage Current	$I \leq 0.01 CV$ (µA) After 2 minutes		
tan δ	Please see the attached standard products list		
Endurance	After the life test with DC rated working voltage at +125 °C±2 °C for 2000 hours, the capacitors shall meet the limits specified below.		
	Capacitance change	±30 % of initial measured value	
	tan δ	≤ 300 % of initial specified value	
	DC leakage current	≤ initial specified value	
	ESR after Endurance (Ω/100kHz)		Size Code
	Initial(+20 °C)	D8	
	After 2000 h(-40 °C)	6	
Shelf Life	After storage for 1000 hours at +125 °C±2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance. (With voltage treatment)		
Resistance to Soldering Heat	After reflow soldering and then being stabilized at +20 °C, capacitors shall meet the following limits.		
	Capacitance change	±10 % of initial measured value	
	tan δ	≤ initial specified value	
	DC leakage current	≤ initial specified value	

■ Frequency correction factor for ripple current

Correction factor	Frequency (Hz)			
	120	1 k	10 k	100 k to
	0.65	0.85	0.95	1.00

■ Marking

Example: 35 V 47 µF Marking color : BLACK

Rated Voltage Mark

V	35 V
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■ Dimensions in mm (not to scale)

(Unit : mm)

Size code	D	L	A, B	H	I	W	P	K
D8	6.3	7.7±0.3	6.6	7.8 max.	2.6	0.65±0.1	1.8	0.35 ^{+0.15} _{-0.20}

() Reference size

* This product qualify for AEC-Q200, but it has some deviations.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

01 Mar. 2014

■ Standard Products

Endurance : 125 °C 2000 h

W.V.	Cap. (±20 %)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia.	Length	Size Code	Ripple Current (100 kHz) (+125 °C) (mA r.m.s.)	E.S.R. (100 kHz) (+20 °C) (Ω)	tan δ (120 Hz) (+20 °C)			Taping (pcs)
(V)	(μF)	(mm)	(mm)							
35	47	6.3	7.7	D8	197	0.30	0.16	EEETQV470XAP	(5)	900
	100	6.3	7.7	D8	197	0.30	0.16	EEETQV101XAP	(5)	900

If Part number exceeds 12 digits, voltage code is abbreviated as follows; 1V→V

· Please refer to the page of "Reflow Profile" and "The Taping Dimensions".