

Surface Mount Type

Series: TB Type : V

- Features**
 - Endurance : 125°C 500 to 1000 h
 - For use near car engines.
 - Good for electronically controlled units (ECU, ABS etc).
 - 125°C guarantee. Low temp. Characteristic stability type.
 - Vibration-proof product is available upon request.(φ8 ≦)
 - RoHS directive compliant(Parts No:EEE*)

Country of Origin

Japan

Low temp. stability

TB

↑

TA



Specifications

Category temp. range	-40 to +125°C						
Rated W.V. Range	10 to 50 V .DC						
Nominal Cap. Range	10 to 330 μ F						
Capacitance Tolerance	±20 % (120Hz/+20°C)						
DC Leakage Current	$I \leq 0.01 CV$ or $3(\mu A)$ after 2 minutes (Whichever is greater)						
tan δ	Please see the attached standard products list						
Characteristics at Low Temperature	W.V. (V)	10	16	25	35	50	(Impedance ratio at 120 Hz)
	-25 / +20 °C	3	2	2	2	2	
	-40 / +20 °C	6	4	4	3	3	
Endurance	After applying rated working voltage for 500 hours (φ8) and for 1000 hours (φ10) at +125±2°C and then being stabilized at +20°C, capacitors shall meet the following limits.						
	Capacitance change	±30 % of initial measured value					
	tan δ	≤ 300 % of initial specified value					
	DC leakage current	≤ initial specified value					
Shelf Life	After storage for 250 hours (φ8) and for 500 hours (φ10) at +125±2°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet the following limits. (With voltage treatment)						
	Capacitance change	±30 % of initial measured value					
	tan δ	≤ 300 % of initial specified value					
	DC leakage current	≤ initial specified value					
Resistance to Soldering Heat	After reflow soldering and then stabilized at +20°C, capacitor shall meet the following limits.						
	Capacitance change	±10 % of initial measured value					
	tan δ	≤ Initial specified value					
	DC leakage current	≤ initial specified value					

Marking

Example: 16V 100 μF (Polarized)

W.V. code

Negative polarity marking

Capacitance (μF)

Series identification

Lot number

W.V. code	10	16	25	35	50
Code	A	C	E	V	H

Dimensions in mm (not to scale)

() reference size

Size code	D	L	A,B	H	I	W	P	K
E	8.0	6.2	8.3	9.5MAX	3.4	0.65±0.1	2.2	0.35 -0.20 to +0.15
F	8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70±0.2
G	10.0	10.2	10.3	12.0MAX	3.5	0.90±0.2	4.6	0.70 ±0.2

Case size

W.V.(V) Cap.(μF)	10 (1A)	16 (1C)	25 (1E)	35 (1V)	50 (1H)
10					E
22					E
33				E	F
47			E	F	G
100	E	F	F	G	
220	F	G			
330	G				

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.

Apr. 2005

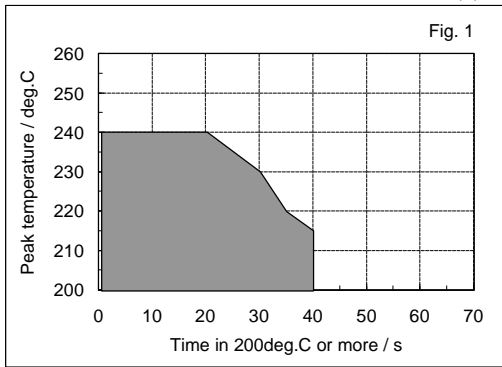
■ Standard Products

W.V. (V)	Cap. (±20%) (μF)	Case size			Specification			Part No. (RoHS: not compliant)	Reflow	Part No. (RoHS: compliant)	Reflow	Min. Packaging Q'ty Taping (pcs)
		Dia. (mm)	Length (mm)	Size Code	Ripple current (100kHz (+125°C) (mA)	tan δ (120Hz) (+20°C)	Endur- ance (hours)					
10	100	8	6.2	E	100	0.30	500	EEVTB1A101P	(2)	EEETB1A101P	(5)	1000
	220	8	10.2	F	197	0.30	500	EEVTB1A221P	(2)	EEETB1A221P	(5)	500
	330	10	10.2	G	270	0.30	1000	EEVTB1A331P	(2)	EEETB1A331P	(5)	500
16	100	8	10.2	F	156	0.23	500	EEVTB1C101P	(2)	EEETB1C101P	(5)	500
	220	10	10.2	G	248	0.23	1000	EEVTB1C221P	(2)	EEETB1C221P	(5)	500
25	47	8	6.2	E	90	0.18	500	EEVTB1E470P	(2)	EEETB1E470P	(5)	1000
	100	8	10.2	F	148	0.18	500	EEVTB1E101P	(2)	EEETB1E101P	(5)	500
35	33	8	6.2	E	85	0.16	500	EEVTB1V330P	(2)	EEETB1V330P	(5)	1000
	47	8	10.2	F	140	0.16	500	EEVTB1V470P	(2)	EEETB1V470P	(5)	500
	100	10	10.2	G	223	0.16	1000	EEVTB1V101P	(2)	EEETB1V101P	(5)	500
50	10	8	6.2	E	40	0.14	500	EEVTB1H100P	(2)	EEETB1H100P	(5)	1000
	22	8	6.2	E	80	0.14	500	EEVTB1H220P	(2)	EEETB1H220P	(5)	1000
	33	8	10.2	F	133	0.14	500	EEVTB1H330P	(2)	EEETB1H330P	(5)	500
	47	10	10.2	G	221	0.14	1000	EEVTB1H470P	(2)	EEETB1H470P	(5)	500

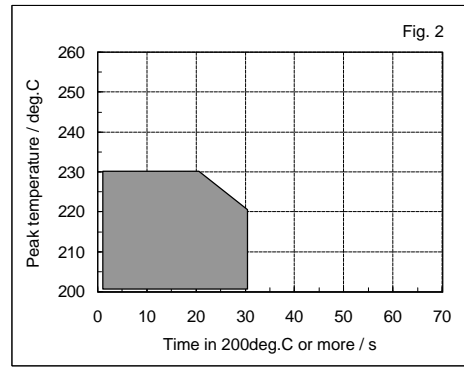
The taping dimensions are explained on p.187 of our Catalog.
Please use it as a reference guide.
Reflow Profile(Fig-1 to Fig-5) listed on the last page.

Pre-fix	Suffix	Case Diameter	RoHS Compliant	Terminal Finish	Reflow Condition		Reflow Chart
					Peak Temperature	Time above 200	
ECE-V	R	3mm to 5mm	No	Sn-Pb	240 for 5 seconds	20 seconds	(1) Fig.1
	P	6mm	No	Sn-Pb	240 for 5 seconds	20 seconds	(1) Fig.1
	P	8mm to 10mm	No	Sn-Pb	230 for 5 seconds	20 seconds	(2) Fig.2
EEV-	R	4mm to 5mm	No	Sn-Pb	240 for 5 seconds	20 seconds	(1) Fig.1
	P	6mm	No	Sn-Pb	240 for 5 seconds	20 seconds	(1) Fig.1
	P	8mm to 10mm	No	Sn-Pb	230 for 5 seconds	20 seconds	(2) Fig.2
	Q	12.5mm	Yes	Sn	230 for 5 seconds	20 seconds	(2) Fig.2 (Except for EB series) (3) Fig.3 (EB series only)
	M	16mm to 18mm	Yes	Sn	230 for 5 seconds	20 seconds	(2) Fig.2 (Except for EB series) (3) Fig.3 (EB series only)
EEE-	R	3mm to 5mm	Yes	Sn-Bi	250 for 5 seconds	60 seconds	(4) Fig.4
	P	6mm	Yes	Sn-Bi	250 for 5 seconds	60 seconds	(4) Fig.4
	P	8mm to 10mm	Yes	Sn-Bi	235 for 5 seconds	60 seconds	(5) Fig.5

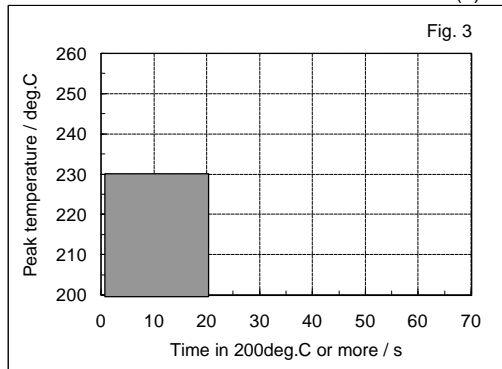
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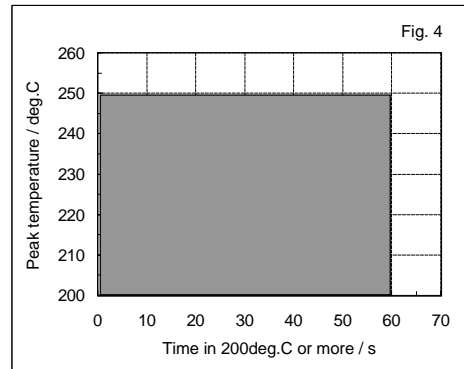
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(3)



(4)



(5)

