

### Surface Mount Type

Series: TA    Type : V

Country of Origin  
Japan



- Features
  - Endurance: 125°C 1000 h
  - For use near car engines.
  - Good for electronically controlled units (ECU, ABS etc).
  - Vibration-proof product is available upon request. ( $\phi 8 \leq$ )
  - RoHS directive not compliant.
  - TG series is recommended for RoHS compliant.

#### ■ Specifications

Category temp. range	-40 to +125°C						
Rated W.V. Range	10 to 50 V .DC						
Nominal Cap. Range	10 to 330 $\mu$ F						
Capacitance Tolerance	$\pm 20$ % (120Hz/+20°C)						
DC Leakage Current	$I \leq 0.01 CV$ or $3(\mu A)$ after 2 minutes (Whichever is greater)						
tan $\delta$	Please see the attached standard products list						
Characteristics at Low Temperature	W.V. (V)	10	16	25	35	50	(Impedance ratio at 120Hz)
	-25 / +20 °C	8	5	4	3	3	
	-40 / +20 °C	14	12	10	8	8	
Endurance	After applying rated working voltage for 1000 hours at +125 $\pm$ 2°C and then being stabilized at +20°C, capacitors shall meet the following limits.						
	Capacitance change	$\pm 30$ % of initial measured value					
	tan $\delta$	$\leq 300$ % of initial specified value					
	DC leakage current	$\leq$ initial specified value					
Shelf Life	After storage for 500 hours at +125 $\pm$ 2°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet the following limits. (With voltage treatment)						
	Capacitance change	$\pm 20$ % of initial measured value					
	tan $\delta$	$\leq 200$ % of initial specified value					
	DC leakage current	$\leq$ initial specified value					
Resistance to Soldering Heat	After reflow soldering and then being stabilized at +20°C, capacitor shall meet the following limits.						
	Capacitance change	$\pm 10$ % of initial measured value					
	tan $\delta$	$\leq$ initial specified value					
	DC leakage current	$\leq$ initial specified value					

#### ■ Marking

Example: 16V 100  $\mu$ F (Polarized)

W.V. code

Negative polarity marking

Capacitance ( $\mu$ F)

Series identification

Lot number

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

#### ■ Dimensions in mm (not to scale)

( ) reference size

(mm)

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

#### ■ Case size

W.V.(V) Cap. ( $\mu$ F)	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	Min. Packaging Q'ty
		Dia. (mm)	Length (mm)	Size Code	Ripple current (100kHz) (+125°C) (mA)	tan δ (120Hz) (+20°C)			Taping (pcs)
10	100	8	6.2	E	62	0.32	EEVTA1A101P	(2)	1000
	220	8	10.2	F	93	0.32	EEVTA1A221P	(2)	500
	330	10	10.2	G	118	0.32	EEVTA1A331P	(2)	500
16	100	8	10.2	F	89	0.24	EEVTA1C101P	(2)	500
	220	10	10.2	G	113	0.24	EEVTA1C221P	(2)	500
25	47	8	6.2	E	56	0.21	EEVTA1E470P	(2)	1000
	100	8	10.2	F	84	0.21	EEVTA1E101P	(2)	500
35	33	8	6.2	E	53	0.18	EEVTA1V330P	(2)	1000
	47	8	10.2	F	79	0.18	EEVTA1V470P	(2)	500
	100	10	10.2	G	101	0.18	EEVTA1V101P	(2)	500
50	10	8	6.2	E	25	0.18	EEVTA1H100P	(2)	1000
	22	8	6.2	E	50	0.18	EEVTA1H220P	(2)	1000
	33	8	10.2	F	74	0.18	EEVTA1H330P	(2)	500
	47	10	10.2	G	94	0.18	EEVTA1H470P	(2)	500

The taping dimensions are explained on p.187 of our Catalog.

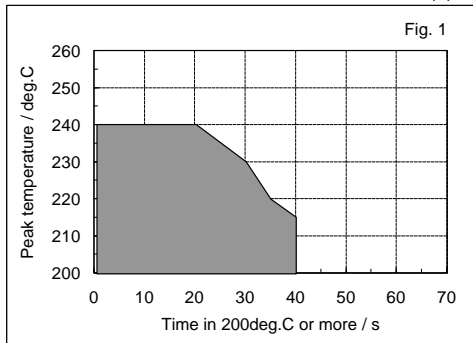
Please use it as a reference guide.

Endurance : 125°C 1000h

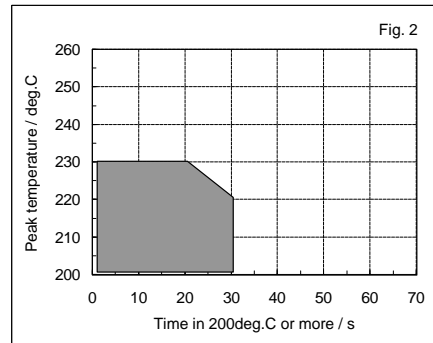
Reflow profile(Fig-1 to Fig-5) listed on the last page.

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

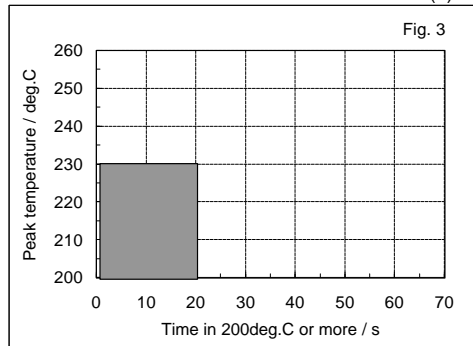
(1)



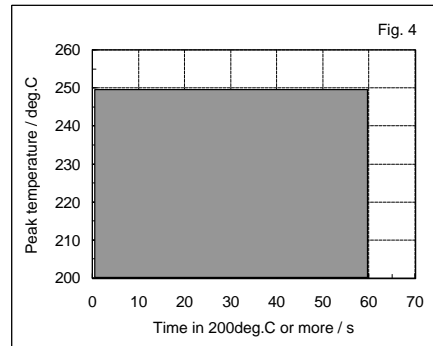
(2)



(3)



(4)



(5)

