

Surface Mount Type

Series : **TC** Type : **V**

High temperature Lead-Free reflow



Features

- High ripple current (50 % higher than TP series)
- Endurance: 3000 h at 125 °C (D8 size: 2000 h)
- Added ESR specification after the endurance test
- Vibration-proof product is available upon request. ($\phi 8$ mm and larger)
- RoHS directive compliant

Specifications

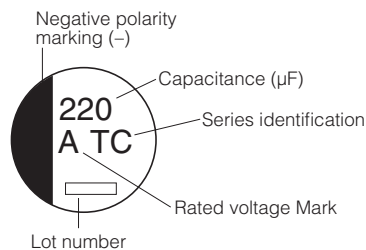
Category temp. range	-40 °C to +125 °C			
Rated voltage range	10 V.DC to 35 V.DC			
Nominal cap. range	47 μ F to 470 μ F			
Capacitance tolerance	± 20 % (120 Hz/+20 °C)			
DC Leakage current	$I \leq 0.01 CV$ (μ A) After 2 minutes			
Dissipation factor (tan δ)	Please see the attached characteristics list			
Endurance	After applying rated working voltage for 3000 hours (D8 size : 2000 h) at +125 °C ± 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	\leq initial specified value		
	ESR after Endurance ($\Omega/100kHz$)		Size code	
D8			F	G
Initial (+20 °C)			0.45	0.2
After 2000 h (-40 °C)	40	4.5	3.5	
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	\leq initial specified value		
DC leakage current	\leq initial specified value			
AEC-Q200	AEC-Q200 compliant			

Frequency correction factor for ripple current

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

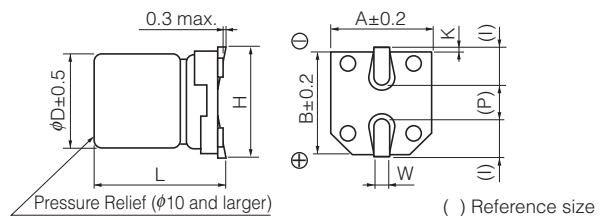
Marking

Example : 10 V.DC 220 μ F
Marking color : BLACK



R. Voltage (V.DC)	10	16	25	35
Code	A	C	E	V

Dimensions (not to scale)



(Unit : mm)

Size code	ϕD	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 $^{+0.15}_{-0.20}$
F	8.0	10.2 ± 0.3	8.3	10.0 max.	3.4	0.90 ± 0.2	3.1	0.70 ± 0.20
G	10.0	10.2 ± 0.3	10.3	12.0 max.	3.5	0.90 ± 0.2	4.6	0.70 ± 0.20

Characteristics list

Endurance : 125 °C 3000 h (D8 size : 2000 h)

Rated voltage (V.DC)	Cap. (±20 %) (μF)	Case size (mm)		Size code	Specification			Part No.	Reflow	Min. Packaging Q'ty	
		φD	L		Ripple Current (100 kHz) (+125 °C) (mA r.m.s.)	ESR (100 kHz) (Ω)				tan δ (120 Hz) (+20 °C)	Taping (pcs)
						+20 °C	-40 °C				
10	220	8	10.2	F	410	0.20	3	0.30	EEETC1A221P	(8)	500
	330	10	10.2	G	750	0.15	2	0.30	EEETC1A331P	(8)	500
	470	10	10.2	G	750	0.15	2	0.30	EEETC1A471P	(8)	500
16	100	6.3	7.7	D8	300	0.45	5	0.23	EEETC1C101XP	(8)	900
		8	10.2	F	410	0.20	3	0.23	EEETC1C101P	(8)	500
	220	8	10.2	F	410	0.20	3	0.23	EEETC1C221P	(8)	500
	330	10	10.2	G	750	0.15	2	0.23	EEETC1C331P	(8)	500
	470	10	10.2	G	750	0.15	2	0.23	EEETC1C471P	(8)	500
	25	100	8	10.2	F	410	0.20	3	0.18	EEETC1E101P	(8)
220		10	10.2	G	750	0.15	2	0.18	EEETC1E221P	(8)	500
330		10	10.2	G	750	0.15	2	0.18	EEETC1E331P	(8)	500
35	47	6.3	7.7	D8	300	0.45	5	0.16	EEETC1V470XP	(8)	900
		8	10.2	F	410	0.20	3	0.16	EEETC1V470P	(8)	500
	100	8	10.2	F	410	0.20	3	0.16	EEETC1V101P	(8)	500
	220	10	10.2	G	750	0.15	2	0.16	EEETC1V221P	(8)	500

- Please refer to the page of "Reflow Profile" and "The Taping Dimensions".
- When requesting vibration-proof product, please put the last "V" instead to "P"