

Surface Mount Type NEW

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. (φ8 mm and larger)
- RoHS compliant

Specifications

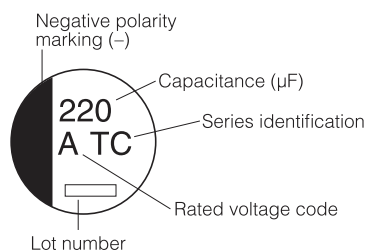
Category temperature range	-40 °C to +125 °C																			
Rated voltage range	10 V.DC to 35 V.DC																			
Rated capacitance range	47 µF to 470 µF																			
Capacitance tolerance	±20 % (120 Hz/+20 °C)																			
Leakage current	I ≤ 0.01 CV (µA) After 2 minutes																			
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	Within ±30 % of the initial value																		
	tan δ	≤ 300 % of the initial limit																		
	DC leakage current	Within the initial limit																		
	ESR after endurance (Ω/100kHz)		<table border="1"> <thead> <tr> <th colspan="4">Size code</th> </tr> <tr> <th>D8</th> <th>F</th> <th colspan="2">G</th> </tr> </thead> <tbody> <tr> <td>Initial (+20 °C)</td> <td>0.45</td> <td>0.2</td> <td>0.15</td> </tr> <tr> <td>After 2000 h (-40 °C)</td> <td>40</td> <td>4.5</td> <td>3.5</td> </tr> </tbody> </table>			Size code				D8	F	G		Initial (+20 °C)	0.45	0.2	0.15	After 2000 h (-40 °C)	40	4.5
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D8	F	G																		
Initial (+20 °C)	0.45	0.2	0.15																	
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	Within ±10 % of the initial value																		
	tan δ	Within the initial limit																		
	DC leakage current	Within the initial limit																		
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

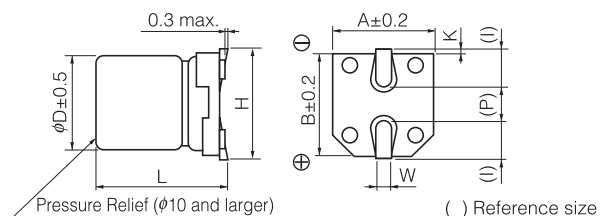
Marking

Example : 10 V.DC 220 µF
 Marking color : BLACK



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

Dimensions



(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	10.0max.	3.4	0.90±0.2	3.1	0.70±0.20
G	10.0	10.2±0.3	10.3	12.0max.	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)	500
25	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"