Surface Mount Type

Series : **TC**

POSCAP

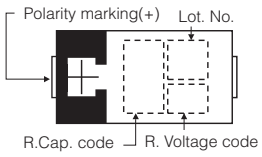
Features

- Guaranteed at 125 °C
- RoHS compliance, Halogen free

Specifications

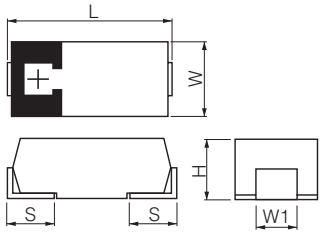
Size code	D2E	D3L	D4
Category temperature range	–55 °C to +125 °C		
Rated voltage range	4 V.DC to 6.3 V.DC	2.5 V.DC to 10 V.DC	
Category voltage range	3.2 V.DC to 5.0 V.DC	2.0 V.DC to 8.0 V.DC	
Rated capacitance range	100 µF to 330 µF	150 µF to 680 µF	330 µF to 1000 µF
Capacitance tolerance	±20 % (120 Hz / + 20 °C)		
Leakage current	Please see the attached characteristics list		
Dissipation factor (tan δ)	Please see the attached characteristics list		
Surge voltage (V.DC)	Rated voltage × 1.15		
Endurance	+125 °C, 1000 h Category temperature range voltage applied		
	Capacitance change	Within ±20 % of the initial value	
	tan δ	≦ 2 times of the initial limit	
	DC leakage current	≦ 2 times of the initial limit	
Damp heat (Steady State)	+60 °C, 90 % to 95 %, 500 h, No-applied voltage		
	Capacitance change	Within +50 %, –20 % of the initial value (ETCF1000M6H (5H))	
		Within +40 %, –20 % of the initial value (Except for above model)	
	tan δ	≦ 1.5 times of the initial limit	
	DC leakage current	≦ 3 times of the initial limit	

Marking



R. Voltage (V.DC)	2.5	4.0	6.3	10.0
Code	e	g	j	A

Dimensions (not to scale)



Unit : mm

Size code	L±0.3	W±0.2	H±0.2*1	S±0.2	W1±0.1
D2E	7.3	4.3	1.8	1.3	2.4
D3L	7.3	4.3	2.8	1.3	2.4
D4	7.3	4.3	3.8	1.3	2.4

✻ Externals of figure are the reference.
✻ 1 ±0.1 : D2E

Characteristics list

Series	Rated voltage (V.DC)	Rated temp. (°C)	Category voltage (V.DC)	Category temp. (°C)	Rated capacitance (µF)	Case size (mm) L	W	H	Size code	Specifications Ripple *1 current (mArm.s.)	ESR *2 (mΩ max.)	tan δ *3	LC *4 (µA)	Standard Part number	Min. Packaging Q'ty (pcs)
TCE	2.5	105	2.0	125	680	7.3	4.3	2.8	D3L	3500	12	0.10	170.0	ETCE680MCL	2500
		105	2.0	125		7.3	4.3	2.8		3100	15	0.10	170.0	ETCE680MFL	2500
		105	2.0	125	1000	7.3	4.3	3.8	D4	3900	15	0.15	250.0	ETCE1000MF	2000
	4	105	3.2	125	150	7.3	4.3	1.8	D2E	2800	18	0.10	60.0	4TCE150MI	3000
		105	3.2	125	220	7.3	4.3	1.8		3100	15	0.10	88.0	4TCE220MF	3000
		105	3.2	125		7.3	4.3	1.8		2800	18	0.10	88.0	4TCE220MI	3000
		105	3.2	125		7.3	4.3	1.8		2400	25	0.10	88.0	4TCE220M	3000
		105	3.2	125	330	7.3	4.3	1.8		2800	18	0.10	132.0	4TCE330MI	3000
		105	3.2	125		7.3	4.3	1.8		2400	25	0.10	132.0	4TCE330M	3000
		105	3.2	125	470	7.3	4.3	2.8	D3L	3500	12	0.10	188.0	4TCE470MCL	2500
		105	3.2	125		7.3	4.3	2.8		3100	15	0.10	188.0	4TCE470MFL	2500
		105	3.2	125		7.3	4.3	2.8		2800	18	0.10	188.0	4TCE470MIL	2500
		105	3.2	125		7.3	4.3	2.8		2400	25	0.10	188.0	4TCE470ML	2500
	6.3	105	5.0	125	100	7.3	4.3	1.8	D2E	2800	18	0.10	63.0	6TCE100MI	3000
		105	5.0	125		7.3	4.3	1.8		2400	25	0.10	63.0	6TCE100M	3000
		105	5.0	125	150	7.3	4.3	1.8		3100	15	0.10	94.5	6TCE150MF	3000
		105	5.0	125		7.3	4.3	1.8		2800	18	0.10	94.5	6TCE150MI	3000
		105	5.0	125		7.3	4.3	1.8		2400	25	0.15	94.5	6TCE150M	3000
		105	5.0	125	220	7.3	4.3	1.8		2800	18	0.15	138.6	6TCE220MI	3000
		105	5.0	125		7.3	4.3	1.8		2400	25	0.15	138.6	6TCE220M	3000
		105	5.0	125	330	7.3	4.3	2.8	D3L	3100	15	0.10	207.9	6TCE330MFL	2500
		105	5.0	125		7.3	4.3	2.8		2800	18	0.10	207.9	6TCE330MIL	2500
		105	5.0	125		7.3	4.3	2.8		2400	25	0.10	207.9	6TCE330ML	2500
		105	5.0	125	470	7.3	4.3	3.8	D4	3500	18	0.15	296.1	6TCE470MI	2000
		105	5.0	125		7.3	4.3	3.8		3000	25	0.15	296.1	6TCE470M	2000
		105	5.0	125	680	7.3	4.3	3.8		3500	18	0.15	428.4	6TCE680MI	2000
		105	5.0	125		7.3	4.3	3.8		3000	25	0.15	428.4	6TCE680M	2000
	10	105	8.0	125	220	7.3	4.3	2.8	D3L	2800	18	0.10	220.0	10TCE220MIL	2500
		105	8.0	125		7.3	4.3	2.8		2400	25	0.10	220.0	10TCE220ML	2500
		105	8.0	125	330	7.3	4.3	3.8	D4	3000	25	0.10	330.0	10TCE330M	2000
TCF	2.5	105	2.0	125	680	7.3	4.3	2.8	D3L	4400	6	0.10	170.0	ETCF680M6L	2500
		105	2.0	125		7.3	4.3	2.8		4400	7	0.10	170.0	ETCF680M7L	2500
		105	2.0	125		7.3	4.3	2.8		4400	10	0.10	170.0	ETCF680ML	2500
		105	2.0	125		7.3	4.3	3.8	D4	6100	5	0.10	170.0	ETCF680M5H	2000
		105	2.0	125	1000	7.3	4.3	3.8		6100	5	0.10	250.0	ETCF1000M5H	2000
		105	2.0	125		7.3	4.3	3.8		5600	6	0.10	250.0	ETCF1000M6H	2000
	4	105	3.2	125	330	7.3	4.3	2.8	D3L	4000	12	0.10	132.0	4TCF330ML	2500
		105	3.2	125	470	7.3	4.3	2.8		4400	10	0.10	188.0	4TCF470ML	2500
		105	3.2	125	680	7.3	4.3	3.8	D4	4400	10	0.10	272.0	4TCF680MAH	2000
	6.3	105	5.0	125	220	7.3	4.3	2.8	D3L	6100	5	0.10	138.6	6TCF220M5L	2500
		105	5.0	125		7.3	4.3	2.8		4600	9	0.10	138.6	6TCF220M9L	2500
		105	5.0	125		7.3	4.3	2.8		4000	12	0.10	138.6	6TCF220ML	2500
		105	5.0	125	330	7.3	4.3	2.8		3900	9	0.10	207.9	6TCF330M9L	2500
		105	5.0	125	470	7.3	4.3	3.8	D4	4400	10	0.10	296.1	6TCF470MAH	2000
	10	105	10.0	125	150	7.3	4.3	2.8	D3L	3600	15	0.10	150.0	10TCF150ML	2500

✻1 Ripple current (100 kHz/ +45 °C), ✻2 ESR (100 kHz/+20 °C) ✻3 tan δ (120 Hz/+20 °C) ✻4 After 5 minutes

◆ Please refer to each page in this catarog for “Reflow conditions” and “Taping specifications”.