

Surface Mount Type

TC series



POSCAP

Features

- Guaranteed at 125 °C 1000h
- RoHS compliance, Halogen free

Specifications

Size code	B2	D2E	D3L	D4
Category temp. range	-55 °C to +125 °C			
Rated volt. range	2.5 V	4.0 V to 6.3 V	2.5 V to 10 V	
Category volt. range	2.0 V	3.2 V to 5.0 V	2.0 V to 8.0 V	
Rated cap. range	330 μF	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)	Rated voltage × 1.15			
Endurance	+125 °C 1000 h, category voltage applied			
	Capacitance change	Within ±20 % of the initial value		
	Dissipation factor(tan δ)	≤ 2 times of the initial limit		
	Leakage current	≤ 2 times of the initial limit		
Damp heat (Steady State)	+60 °C, 90 % to 95 % RH, 500 h, No-applied voltage			
	Capacitance change	Within +50 %, -20 % of the initial value (ETCF1000M6H(5H))		
	Dissipation factor(tan δ)	≤ 1.5 times of the initial limit		
	Leakage current	≤ 3 times of the initial limit		

Marking

< B2 size >

< D2E, D3L, D4 size >

e	2.5
g	4.0

j	6.3
A	10

< B2 size >

N8	330
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Dimensions (not to scale)

Size code	L	W±0.2	H	S±0.2	W1±0.1
B2	3.5±0.2	2.8	1.9±0.1	0.8	2.2
D2E	7.3±0.3	4.3	1.8±0.1	1.3	2.4
D3L	7.3±0.3	4.3	2.8±0.2	1.3	2.4
D4	7.3±0.3	4.3	3.8±0.2	1.3	2.4

* Externals of figure are the reference.

Characteristics list																																								
Series	Rated voltage (V)	Rated temperature (°C)	Category voltage (V)	Category temp. (°C)	Rated capacitance (μF)	Case size (mm)			Size code	Specifications				Standard		Floor life level																								
						L	W	H		Ripple* ¹ current (mA rms)	ESR* ² (mΩ max.)	tan δ* ³	LC* ⁴ (μA)	Part number	Min. packaging q'ty (pcs)	Reflow temp ≤260°C	Reflow temp ≤250°C																							
NEW	105	2.0	125	330	3.5	2.8	1.9	B2	3200	9/300kHz	0.08	165.0	ETCE330M9GB	2000	3																									
																2.5	680	D3L	3500	12	0.10	170.0	ETCE680MCL	2500																
																			D4	3100	15	0.10	170.0	ETCE680MFL	2500															
																TCE	105	2.0		125	7.3	4.3	2.8	D3L	3900	15	0.15	250.0	ETCE1000MF	2000	3									
																			4.0													150	D2E	2800	18	0.10	60.0	4TCE150MI	3000	
																																		220	D3L	3100	15	0.10	88.0	4TCE220MF
																			330													D2E	2800			18	0.10	88.0	4TCE220MI	3000
																																	470	D3L	2400	25	0.10	88.0	4TCE220M	3000
																			7.3													4.3			1.8	D2E	2800	18	0.10	132.0
																																	D3L	2400			25	0.10	132.0	4TCE330M
7.3	4.3	2.8	D2E	3500	12	0.10	188.0	4TCE470MCL	2500																															
				D3L	3100	15	0.10	188.0	4TCE470MFL	2500																														
7.3	4.3	2.8	D2E		2800	18	0.10	188.0	4TCE470MIL	2500																														
				D3L	2400	25	0.10	188.0	4TCE470ML	2500																														
6.3	105	5.0	125		7.3	4.3	1.8	D2E	2800	18	0.10	63.0	6TCE100MI	3000	3																									
				100												D2E	2400	25	0.10	63.0	6TCE100M	3000																		
																	150	D2E	3100	15	0.10	94.5	6TCE150MF	3000																
				220												D2E			2800	18	0.10	94.5	6TCE150MI	3000																
																	7.3	4.3	1.8	D2E	2400	25	0.15	94.5	6TCE150M	3000														
				330												D3L					2800	18	0.15	138.6	6TCE220MI	3000														
																	7.3	4.3	2.8	D3L	2400	25	0.15	138.6	6TCE220M	3000														
				7.3												4.3					2.8	D3L	3100	15	0.10	207.9	6TCE330MFL	2500												
																	7.3	4.3	2.8	D3L			2800	18	0.10	207.9	6TCE330MIL	2500												
				7.3												4.3					2.8	D3L	2400	25	0.10	207.9	6TCE330ML	2500												
7.3	4.3	3.8	D4		3500	18	0.15	296.1	6TCE470MI	2000																														
				7.3	4.3	3.8	D4	3000	25	0.15	296.1	6TCE470M	2000																											
7.3	4.3	3.8	D4					3500	18	0.15	428.4	6TCE680MI	2000																											
				7.3	4.3	3.8	D4	3000	25	0.15	428.4	6TCE680M	2000																											
10	105	8.0	125					7.3	4.3	2.8	D3L	2800	18	0.10	220.0	10TCE220MIL	2500	-																						
				220	D3L	2400	25												0.10	220.0	10TCE220ML	2500																		
330	D4	3000	25			0.10	330.0	10TCE330M	2000																															
		TCF	105	2.0	125	7.3	4.3	2.8	D3L	4400	6	0.10	170.0	ETCF680M6L	2500	3																								
2.5	680																D3L	4400	7	0.10	170.0	ETCF680M7L	2500																	
																		D4	4400	10	0.10	170.0	ETCF680ML	2500																
1000	D4																6100		5	0.10	170.0	ETCF680M5H	2000																	
																	7.3	4.3	3.8	D4	6100	5	0.10	250.0	ETCF1000M5H	2000														
7.3	4.3																				3.8	D4	5600	6	0.10	250.0	ETCF1000M6H	2000												
																	105	3.2	125	330			7.3	4.3	2.8	D3L	4000	12	0.10	132.0	4TCF330ML	2500								
470	D3L																				4400	10											0.10	188.0	4TCF470ML	2500				
																	680	D4	4400	10	0.10	272.0	4TCF680MAH	2000																
105	5.0																		125	220	7.3	4.3	2.8	D3L	6100	5	0.10	138.6	6TCF220M5L	2500										
		7.3	4.3	2.8	D3L	4600	9	0.10	138.6	6TCF220M9L	2500																													
7.3	4.3					2.8	D3L	4000	12	0.10	138.6	6TCF220ML	2500																											
		330	D3L	3900	9			0.10	207.9	6TCF330M9L	2500																													
470	D4			4400	10	0.10	296.1	6TCF470MAH	2000																															
		10	105	8.0	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 catalog for "Reflow conditions", "Taping specifications" and "Floor life level".

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