Surface mount type

TQC Series

Up Grade

RoHS compliance

High voltage

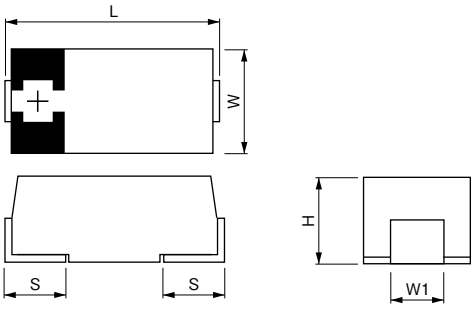
TQC series is perfect for high voltage, low ESR and low profile applications. It is the most suitable for pass-con of the motor driver by 12V, the input of the DCDC converter.

TPB (Standard) → TQC High voltage

■ Specifications

Items	Condition		Specifications			
Rated voltage (V)	–		16	20	25	35
Surge voltage (V)	–		20	23	29	40
Category temperature range (℃)	–		−55 to +105			
Capacitance tolerance (%)	120Hz/20℃		M : ±20			
Rated capacitance range (μF)	120Hz/20℃		5.6 to 100			
Dissipation Factor (DF)	120Hz/20℃		Please see the attached characteristics list			
Leakage current	Rated voltage applied, after 5 minutes		Please see the attached characteristics list			
Equivalent series resistance (ESR)	100kHz/20℃		Please see the attached characteristics list			
Characteristics of impedance ratio at high temp. and low temp.	100kHz/+20℃	−55℃ Z/Z20℃	1.0 to 2.0			
		+105℃ Z/Z20℃	0.6 to 1.0			
Endurance	105℃, 2,000h Rated voltage applied	△C/C	Within ±20% of the initial value			
		DF	Within 1.5 times of the initial limit			
		LC	Within the initial limit			
Damp heat (Steady State)	60℃, 90 to 95%RH, 500h, No-applied voltage	△C/C	Within +40%,−20% of the initial value			
		DF	Within 1.5 times of the initial limit			
		LC	Within 3 times of the initial limit			
Surge	15 to 35℃, 1,000 cycies, 1kΩ discharge resistance, surge voltage applied	△C/C	Within ±5% of the initial value			
		DF	Within the initial limit			
		LC	Within 3 times of the initial limit			

■ Dimensions



(unit: mm)

Size code	L ±0.2※1	W ±0.2	H ±0.1※2	S ±0.2	W1 ±0.1
B2	3.5	2.8	1.9	0.8	2.2
C	6.0	3.2	2.8	1.3	1.8
D2	7.3	4.3	1.9	1.3	2.4
D3L	7.3	4.3	2.8	1.3	2.4
D3	7.3	4.3	3.1	1.3	2.4

※1 ±0.3:D3L ※2 ±0.2:C,D3L,D3

■ Size list

RV : Rated voltage

μF \ RV	16	20	25	35
5.6			B2	
8.2		B2		
10	B2		C	D2
15	B2	C	D2	
22	C	D2	D2	
33	D2		D3L	
47	D2	D2, D3L		
68	D2, D3L			
100	D3			

■ TQC series characteristics list

Size code	Part number	Rated voltage (V)	Rated temperature (℃)	Rated capacitance (μF)	Category voltage (V)	Category temperature (℃)	DF (% max)	LC (μA) max/5min.	ESR (mΩmax) 100kHz/20℃	Maximum allowable ripple current (mArms) 100kHz※1	MSL Reflow temp. ≤ 260℃	MSL Reflow temp. ≤ 250℃
B2	25TQC5R6M	25	105	5.6	25	105	10.0	42.0	100	800	—	3
	20TQC8R2M	20	105	8.2	20	105	10.0	49.2	100	800	—	3
	16TQC15M	16	105	15	16	105	10.0	72.0	90	1000	—	3
	16TQC10M	16	105	10	16	105	10.0	48.0	100	800	—	3
C	25TQC10M	25	105	10	25	105	10.0	25.0	95	900	—	3
	20TQC15M	20	105	15	20	105	10.0	30.0	80	1000	—	3
	16TQC22M	16	105	22	16	105	10.0	35.2	80	1000	—	3
D2	35TQC10M	35	105	10	35	105	10.0	35.0	120	1000	—	3
	25TQC22M	25	105	22	25	105	10.0	55.0	90	1000※2	—	3
	25TQC22MV	25	105	22	25	105	10.0	55.0	45	1500※2	—	3
	25TQC15M	25	105	15	25	105	10.0	38.0	90	1000※2	—	3
	25TQC15MV	25	105	15	25	105	10.0	38.0	45	1500※2	—	3
	20TQC47MY	20	105	47	20	105	10.0	94.0	55	1450	—	3
	20TQC22M	20	105	22	20	105	10.0	44.0	80	1300	—	3
	16TQC68MY	16	105	68	16	105	10.0	108.8	50	1500	—	3
	16TQC47M	16	105	47	16	105	10.0	75.2	70	1400	—	3
	16TQC47MW	16	105	47	16	105	10.0	75.2	40	1800	—	3
	16TQC33M	16	105	33	16	105	10.0	52.8	70	1400	—	3
D3L	25TQC33M	25	105	33	25	105	10.0	82.5	60	1400	—	3
	20TQC47M	20	105	47	20	105	10.0	94.0	55	1450	—	3
	16TQC68M	16	105	68	16	105	10.0	108.8	50	1500	—	3
D3	16TQC100M	16	105	100	16	105	10.0	160.0	50	1800	—	3

※1 100k to 500kHz,105℃　※2 100k to 300kHz,105℃