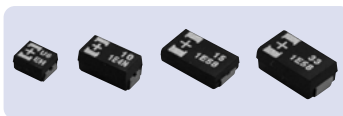


Conductive polymer type / Surface mount type

RoHS compliance

**TQC** Series



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.

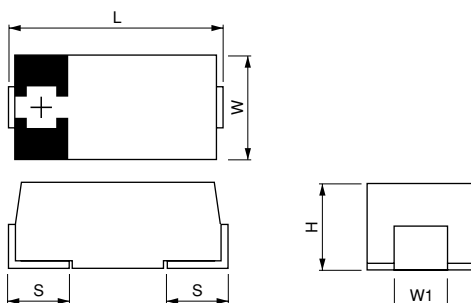
TPB  
(Standard)

TQC  
High voltage

## Specifications

Items	Condition			Specifications			
Rated voltage (V)	—			16	20	25	35
Surge voltage (V)	—			20	23	29	40
Category temperature range (°C)	—			-55 to +105			
Capacitance tolerance (%)	120Hz/20°C			M : ±20			
Rated capacitance range (μF)	120Hz/20°C			5.6 to 100			
Dissipation Factor (DF)	120Hz/20°C			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°C			Please see the attached characteristics list			
Characteristics of impedance ratio at high temp. and low temp.	100kHz/+20°C	-55°C	Z/Z <sub>20°C</sub>	1.0 to 2.0			
		+105°C	Z/Z <sub>20°C</sub>	0.6 to 1.0			
Endurance	105°C, 2,000h Rated voltage applied	ΔC/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°C, 90 to 95%RH, 500h, No-applied voltage	ΔC/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°C, 1,000 cycles, 1kΩ discharge resistance, surge voltage applied	ΔC/C		Within ±5% of the initial value			
		DF		≤ 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

## 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 (°C)	Rated capacitance (μF)	Category voltage (V)	Category temperature (°C)	DF (% max)	LC (μA) max/5min.	ESR (mΩmax) 100kHz/20°C	Maximum allowable ripple current (mA <sub>rms</sub> ) 100kHz*1	MSL
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
	35TQC10M	35	105	10	35	105	10.0	35.0	120	1000	— 3
D2	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
	16TQC33M	16	105	33	16	105	10.0	52.8	70	1400	— 3
	25TQC33M	25	105	33	25	105	10.0	82.5	60	1400	— 3
D3L	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°C \*2 100k to 300kHz, 105°C