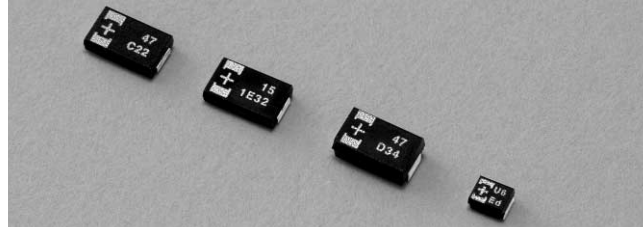


# TQC Series

## High Voltage Products

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.

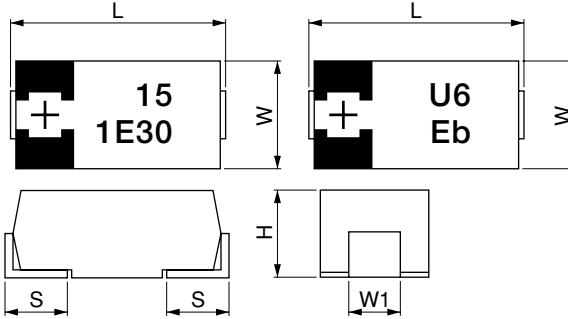


### Specifications

Items	Condition	Characteristics		
Operating Temperature range	—	-55 to +105 (°C)		
Rated capacitance range	120Hz/20°C	5.6 to 68 (μF)		
Capacitance tolerance	120Hz/20°C	M: ±20%		
Rated voltage	—	16 to 25 (V.DC)		
Dissipation Factor (D.F.)	120Hz/20°C	≤ 10.0 (%)		
Leakage current (I) (μA)	Rated voltage applied, after 5 minutes	≤ 0.1CV ※B2size: ≤ 0.3CV		
Equivalent series resistance ESR (mΩmax.)	100kHz/20°C	Please see the attached characteristics list		
Temperature characteristics of Impedance ratio	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, 2000h →25TQC15M, 25TQC22M (category voltage applied), 20TQC22M, 16TQC33M, 16TQC47M (rated voltage applied) 105°C, 1000h →25TQC5R6M, 25TQC33M, 25TQC22MV, 25TQC15MV, 25TQC10M (category voltage applied), 20TQC8R2M, 20TQC47M, 16TQC10M, 16TQC68M, 20TQC15M, 16TQC22M, 20TQC22MV, 20TQC33MV, 16TQC33M, 16TQC47MV (rated voltage applied)	ΔC/C	Within ±20% of the initial value	
		tanδ	≤ 1.5 times the initial limit	
		L.C.	≤ The initial limit	
Damp heat (Steady state)	60°C, 90 to 95% RH, 500h, No voltage applied	ΔC/C	Within +40%, -20% of the initial value	
		tanδ	≤ 1.5 times the initial limit	
		L.C.	≤ 3 times the initial limit	
Surge	15 to 35°C, 1000 times, 1kΩ discharge resistance, surge voltage applied	ΔC/C	Within ±5% of the initial value	
		tanδ	≤ The initial limit	
		L.C.	≤ 3 times the initial limit	

### Dimensions (unit: mm)

(C, D2, D3L size) (B2 size)



Size code	L*1 (±0.2)	W (±0.2)	H*2 (±0.1)	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

※1 ±0.3; D3L ※2 ±0.2; C, D3L

### Size List

RV (SV)	16	20	25
μF	(20)	(23)	(29)
5.6			B2
8.2		B2	
10	B2		C
15		C	D2
22	C	D2	D2
33	D2	D2	D3L
47	D2	D3L	
68	D3L		

### Characteristics List

Size code	SANYO Part number	Rated Voltage (V)	Rated temperature (°C)	Category voltage (V)	Category temperature (°C)	Rated Capacitance (μF)	D.F. (%max.)	L.C. (μA) max./5min.	E.S.R. (mΩmax.) 100kHz/20°C	Maximum allowable ripple current (mArms) 100kHz*3
B2	25TQC5R6M	25*4	85	20	105	5.6	10.0	42.0	100	800
	20TQC8R2M	20	105	—	—	8.2	10.0	49.2	100	800
	16TQC10M	16	105	—	—	10	10.0	48.0	100	800
C	25TQC10M	25*4	85	20	105	10	10.0	25.0	95	900
	20TQC15M	20	105	—	—	15	10.0	30.0	80	1000
	16TQC22M	16	105	—	—	22	10.0	35.2	80	1000
D2	25TQC22M	25*4	85	20	105	22	10.0	44.0	90	1000
	25TQC22MV	25*4	85	20	105	22	10.0	55.0	45	1500
	25TQC15M	25*4	85	20	105	15	10.0	38.0	90	1000
	25TQC15MV	25*4	85	20	105	15	10.0	38.0	45	1500
	20TQC22M	20	105	—	—	22	10.0	44.0	80	1300
	20TQC22MV*5	20	105	—	—	22	10.0	44.0	45	1500
	20TQC33MV*5	20	105	—	—	33	10.0	66.0	45	1500
	16TQC33M	16	105	—	—	33	10.0	52.8	70	1400
	16TQC33MV*5	16	105	—	—	33	10.0	52.8	45	1500
	16TQC47M	16	105	—	—	47	10.0	75.2	70	1400
D3L	16TQC47MV*5	16	105	—	—	47	10.0	75.2	45	1500
	25TQC33M	25*4	85	20	105	33	10.0	82.5	60	1400
	20TQC47M	20	105	—	—	47	10.0	94.0	55	1450
	16TQC68M	16	105	—	—	68	10.0	108.8	50	1500

※3: 100k to 500kHz, 105°C ※4: Please reduce 0.25V per 1°C from over 85°C for 25V products ※5: Under development