

TQC series is perfect for high voltage, low ESR and low profile applications. It is most suitable to be used as a bypass capacitor on a 12V motor driver or on the input side of a DC/DC converter.



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/Z20°C	1.0 to 2.0			
		+105°C	Z/Z20°C	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		Within the initial limit			
		LC		Within 3 times of the initial limit			

POSCAP

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Characteristics

Reliability

TPU

TPH

TPG

TPSF

TPC

TPE

TPB

TPL·TPLF

TPF

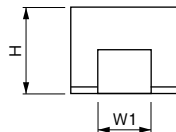
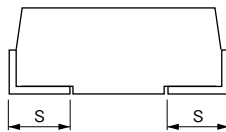
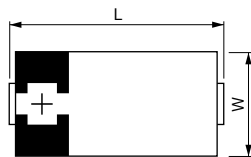
TA

TV

TH

TQC

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
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			D2
15	B2		D2	
22		D2	D2	
33	D2		D2	
47	D2	D2		
68	D2			
100	D2,D3			
150	D3L			

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 _{RMS}) 100kHz*1	MSL	
											Reflow temp. ≤ 260°C	Reflow temp. ≤ 250°C
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
D2	35TQC10M	35	105	10	35	105	10.0	35.0	120	1000	—	3
	25TQC33MYF	25	105	33	25	105	10.0	82.5	60	1400	—	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
	20TQC47MYF	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
	16TQC100MYF	16	105	100	16	105	10.0	160.0	50	1500	—	3
	16TQC68MYF	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	16TQC150MYF	16	105	150	16	105	10.0	240.0	50	1800	—	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

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Surface mount type

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TPF
TA
TV
TH

* Red letters : New models

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