

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

Line-up

Guidelines and precautions for use

Series system diagram

Image of case size

Products list

Explanation of part numbers

Packing specifications

Marking

Recommended land pattern dimension

Recommended soldering condition

Fundamental structure

Characteristics

Reliability

TPU

TPH

TPG

TPSF

TPC

TPE

TPB

TPL-TPLF

TPF

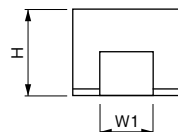
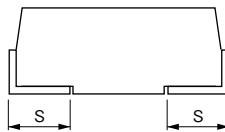
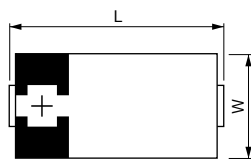
TA

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

POSCAPPOSCAP
Line-upGuidelines and
precautions
for use

Selection guide

Series system
diagram
Image of
case size
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Explanation of
part numbers
Packing
specifications

Technical data

Marking
Recommended
land pattern
dimension
Recommended
soldering
condition
Fundamental
structure
Characteristics
Reliability

Surface mount type

TPU
TPH
TPG
TPSF
TPC
TPE
TPB
TPL·TPLF
TPF
TA
TV
TH**TQC**

* Red letters : New models