

Surface mount type

TQC Series

Update



RoHS directive/Halogen-free compliant
High voltage (35V)

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	2.7 to 150			
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		

Marking and dimensions

B2 size **D12, D15, D2, D3L size**

Rated capacitance^{※3} Rated capacitance

Anode (+) Anode (+)

Rated voltage^{※1} Rated voltage^{※1}

Lot. No.^{※2} Lot. No.^{※2}

(unit : mm)

Size code	L ±0.2 ^{※1}	W ±0.2	H ±0.1 ^{※3}	S ±0.2	W1 ±0.1
B15	3.5	2.8	1.4	0.8	2.2
B2	3.5	2.8	1.9	0.8	2.2
D12	7.3	4.3	1.15	1.3	2.4
D15	7.3	4.3	1.4	1.3	2.4
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:D3L ※3 ±0.05:D12

※1 The rated voltage is as follows.

R.V.	16	20	25	35
Mark	C	D	1E (or E)	V

※2 Lot.No.shows roughly manufacturing date.

※3 The rated capacitance is as follows.

Capacitance (μF)	2.7	3.9	5.6	8.2	10	15	22	33	47	68	100	150
Mark	L6	Q6	U6	Y6	A7	E7	J7	N7	S7	W7	A8	E8

Recommended land pattern dimension of PWB

(unit : mm)

Size code	a	b	c
B15	1.6	2.7	1.4
B2	1.6	2.7	1.4
D12	2.4	2.9	3.7
D15	2.4	2.9	3.7
D2	2.4	2.9	3.7
D3L	2.4	2.9	3.7

Size list

RV:Rated voltage

RV	16	20	25	35
μF				
2.7				B15
3.9				B2
5.6			B2	
8.2		B2		
10	B2			D2
15	B2		B2, D2	
22		B2, D2	D15, D2	
33	D12, D2	D2	D2	
47	D15, D2	D15, D2		
68	D2			
100	D2	D3L		
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 (mΩ max) 100kHz/20°C	Maximum allowable ripple current (mA rms) 100kHz※1	MSL	
											Reflow temp. ≤ 260°C	Reflow temp. ≤ 250°C
B15	35TQC2R7MYF	35	105	2.7	35	105	10	47.3	300	800	—	3
B2	35TQC3R9MYF	35	105	3.9	35	105	10	40.9	400	500	—	3
	25TQC15MYFB	25	105	15	25	105	10	112.5	100	900	—	3
	25TQC5R6M	25	105	5.6	25	105	10	42.0	100	800	—	3
	20TQC22MYFB	20	105	22	20	105	10	132.0	90	1000	—	3
	20TQC8R2M	20	105	8.2	20	105	10	49.2	100	800	—	3
	16TQC15M	16	105	15	16	105	10	72.0	90	1000	—	3
	16TQC10M	16	105	10	16	105	10	48.0	100	800	—	3
D12	16TQC33MYFS	16	105	33	16	105	10	52.8	40	1800	—	3
D15	25TQC22MYFT	25	105	22	25	105	10	55.0	70	1400	—	3
	20TQC47MYFT	20	105	47	20	105	10	94.0	55	1500	—	3
	16TQC47MYFT	16	105	47	16	105	10	75.2	55	1500	—	3
D2	35TQC10M	35	105	10	35	105	10	35.0	120	1000	—	3
	25TQC33MYF	25	105	33	25	105	10	82.5	60	1400	—	3
	25TQC22MV	25	105	22	25	105	10	55.0	45	1500※2	—	3
	25TQC22MYFD	25	105	22	25	105	10	55.0	60	1400	—	3
	25TQC15MV	25	105	15	25	105	10	38.0	45	1500※2	—	3
	25TQC15MYFD	25	105	15	25	105	10	38.0	90	1000※2	—	3
	20TQC47MYF	20	105	47	20	105	10	94.0	55	1450	—	3
	20TQC33MYFD	20	105	33	20	105	10	66.0	60	1400	—	3
	20TQC22MYFD	20	105	22	20	105	10	44.0	80	1300	—	3
	16TQC100MYF	16	105	100	16	105	10	160.0	50	1800	—	3
	16TQC68MYF	16	105	68	16	105	10	108.8	50	1500	—	3
	16TQC47MW	16	105	47	16	105	10	75.2	40	1800	—	3
	16TQC47MYFD	16	105	47	16	105	10	75.2	55	1450	—	3
16TQC33MYFD	16	105	33	16	105	10	52.8	70	1400	—	3	
D3L	20TQC100MYF	20	105	100	20	105	10	200.0	55	1700	—	3
	16TQC150MYF	16	105	150	16	105	10	240.0	50	1800	—	3

※1 100k~500kHz,105°C ※2 100k~300kHz,105°C