

VQ series

125°C High Temperature

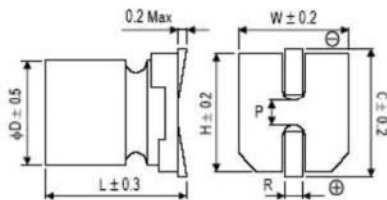
- SMD Type, High reliability, High temperature
- Load life of 2000 hours at 125°C
- Compliant to the RoHS directive (2011/65/EU)
- Suitable for High reliability requirement of Electronic Equipment.

具有优异的热稳定性，可承受125°C环境温度，产品满足RoHS指令(2011/65/EU)，适用于提高电子设备的可靠度。

» Specifications

Items	Characteristics	
Operating Temp. Range	-55°C ~ +125°C	
Capacitance Range	47 ~ 1800 uF	
Capacitance Tolerance	M: ± 20%	
Rated Voltage Range	2.5V ~ 35V DC	
Dissipation Factor	Not to exceed the value specified	
(at 120Hz, 20°C)	Not to exceed the value specified (after 2 minutes)	
Leakage Current	Not to exceed the value specified	
ESR (100K-300KHz) Endurance 105°C, 2000h, at rated voltage	Capacitance Change	Within ± 20% of the value before test
	Leakage current	Not to exceed the value specified
	ESR	Not to exceed 150% of the value specified
	Dissipation Factor	Not to exceed 150% of the value specified
Moisture Resistance Stored at 60°C, Rh90 ~ 95%, 1000h	Capacitance Change	Within ± 20% of the value before test
	Leakage Current	Not to exceed the value specified
	ESR	Not to exceed 150% of the value specified
	Dissipation Factor	Not to exceed 150% of the value specified

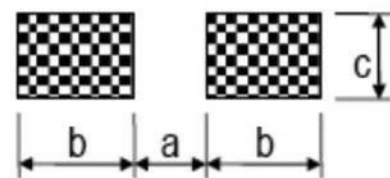
» Diagram of Dimensions



(unit: mm)

φ D × L	W	H	C	R	P
6.3 × 5.8	6.6	6.6	7.2	0.5to0.8	2.1
6.3 × 7.7	6.6	6.6	7.2	0.5to0.8	2.1
6.3 × 9	6.6	6.6	7.2	0.5to0.8	2.1
6.3 × 10	6.6	6.6	7.2	0.5to0.8	2.1
8 × 9.2	8.3	8.3	9.0	0.8to1.1	3.2
8 × 12.2	8.3	8.3	9.0	0.8to1.1	3.2
10 × 10.5	10.3	10.3	11.0	0.8to1.1	4.6
10 × 12.7	10.3	10.3	11.0	0.8to1.1	4.6

» Recommended land pattern



(unit: mm)

φ D × L	a	b	c
6.3 × 5.8	2.1	3.5	1.6
6.3 × 7.7	2.1	3.5	1.6
6.3 × 9	2.1	3.5	1.6
6.3 × 10	2.1	3.5	1.6
8 × 9.2	2.8	4.2	1.9
8 × 12.2	2.8	4.2	1.9
10 × 10.5	4.3	4.4	1.0
10 × 12.7	4.3	4.4	1.9

» Capacitance List

W.V (S.V)	2.5 (2.8)	6.3 (7.3)	10 (11.5)	16 (18.4)	25 (28.7)	35 (41)
6.3 × 5.8	330~470 uF	220~330 uF		100~150 uF	82~120 uF	47~68 uF
6.3 × 7.7	470~680 uF	330~560 uF		150~220 uF	120~180 uF	68~100 uF
6.3 × 9	560~820 uF	470~680 uF		180~270 uF	150~220 uF	82~120 uF
6.3 × 10				220~330 uF	180~270 uF	100~150 uF
8 × 9.2	820~1200 uF	560~1000 uF	390~680 uF	270~470 uF	220~390 uF	100~220 uF
8 × 12.2	1000~1800 uF	820~1500 uF	560~1000 uF	330~680 uF	330~560 uF	180~330 uF
10 × 10.5			560~1000 uF	390~680 uF	330~560 uF	180~330 uF
10 × 12.7			820~1500 uF	560~1000 uF	470~820 uF	220~470 uF

» Characteristics List

W.V. (V)	Capacitance (uF)	L.C. (uA,2min)	tg δ (120Hz,20°C)	ESR (mΩ,100kHz)	Rated Ripple Current (mA, r. m. s)		Size ΦD × L (mm)	Part Number
					105°C < Tx ≤ 125°C	Tx ≤ 105°C		
2.5	390	300	0.08	20	900	2800	6.3 × 5.8	VQ391M2R5E058TR
	560	340	0.08	15	1130	3500	6.3 × 7.7	VQ561M2R5E077TR
	820	410	0.08	9	1650	5100	6.3 × 9	VQ821M2R5E090TR
	1200	600	0.08	9	1710	5300	8 × 9.2	VQ122M2R5F092TR
	1800	1100	0.08	9	1840	5700	8 × 12.2	VQ182M2R5F122TR
6.3	330	415.8	0.08	20	900	2800	6.3 × 5.8	VQ331M6R3E058TR
	470	592.2	0.08	15	1130	3500	6.3 × 7.7	VQ471M6R3E077TR
	560	705.6	0.08	9	1650	5100	6.3 × 9	VQ561M6R3E090TR
	820	1033.2	0.08	9	1710	5300	8 × 9.2	VQ821M6R3F092TR
	1200	1512	0.08	9	1840	5700	8 × 12.2	VQ122M6R3F122TR
10	680	1640	0.08	9	1710	5300	8 × 9.2	VQ681M010F092TR
	820	2000	0.08	9	1840	5700	8 × 12.2	VQ821M010F122TR
	1000	2000	0.08	9	1780	5500	10 × 10.5	VQ102M010G105TR
	1200	2400	0.08	8	1970	6100	10 × 12.7	VQ122M010G127TR
16	100	320	0.10	30	810	2500	6.3 × 5.8	VQ101M016E058TR
	220	704	0.10	20	940	2900	6.3 × 7.7	VQ221M016E077TR
	270	864	0.10	15	1130	3500	6.3 × 9	VQ271M016E090TR
	330	1056	0.10	15	1170	3600	6.3 × 10	VQ331M016E100TR
	470	1504	0.10	16	1230	3800	8 × 9.2	VQ471M016F092TR
	560	1792	0.10	15	1490	4600	8 × 12.2	VQ561M016F122TR
	680	2176	0.10	15	1390	4300	10 × 10.5	VQ681M016G105TR
	1000	3000	0.10	12	1680	5200	10 × 12.7	VQ102M016G127TR
25	100	500	0.10	20	940	2900	6.3 × 7.7	VQ101M025E077TR
	180	900	0.10	18	970	3000	6.3 × 9	VQ181M025E090TR
	220	1100	0.10	18	1000	3100	6.3 × 10	VQ221M025E100TR
	330	1650	0.10	18	1070	3300	8 × 9.2	VQ331M025F092TR
	470	2350	0.10	15	1260	3900	8 × 12.2	VQ471M025F122TR
	560	2800	0.10	16	1190	3700	10 × 10.5	VQ561M025G105TR
	680	3000	0.10	15	1390	4300	10 × 12.7	VQ681M025G127TR

W.V. (V)	Capacitance (μ F)	L.C. (μ A, 2min)	tg δ (120Hz, 20°C)	ESR (m Ω , 100kHz)	Rated Ripple Current (mA, r. m. s)		Size Φ D \times L (mm)	Part Number
					105°C < T _x \leq 125°C	T _x \leq 105°C		
35	82	574	0.10	25	780	2400	6.3 \times 7.7	VQ820M035F077TR
	100	700	0.10	25	810	2500	6.3 \times 9	VQ101M035E090TR
	120	840	0.10	25	870	2700	6.3 \times 10	VQ121M035E100TR
	150	1050	0.10	20	1000	3100	8 \times 9.2	VQ151M035F092TR
	220	1540	0.10	18	1090	3400	8 \times 12.2	VQ221M035F122TR
	330	2310	0.10	20	1090	3400	10 \times 10.5	VQ331M035G105TR
	470	3000	0.10	18	1190	3700	10 \times 12.7	VQ471M035G127TR

» Frequency Coefficient for Ripple Current

Frequency	120Hz \leq freq. < 1KHz	1KHz \leq freq. < 10KHz	10KHz \leq freq. < 100KHz	100KHz \leq freq. < 300KHz
Coefficient	0.05	0.3	0.7	1