

VF series

Long life to 5000hours

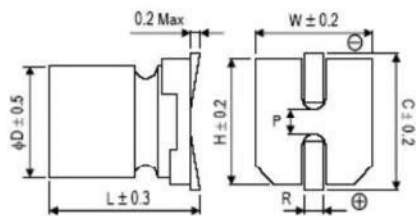
- SMD Type, Low ESR, High ripple current
- Load life of 5000 hours at 105°C
- Compliant to the RoHS directive (2011/65/EU)

低ESR和超大纹波电流贴片固态产品，产品满足RoHS指令(2011/65/EU)。

Specifications

Items	Characteristics	
Operating Temp. Range	-55°C ~ +105°C	
Capacitance Range	47 ~ 3900 uF	
Capacitance Tolerance	M: ±20%	
Rated Voltage Range	2.5V ~ 35V DC	
Dissipation Factor (at 120Hz, 20°C)	Not to exceed the value specified Not to exceed the value specified (after 2 minutes)	
Leakage Current	Not to exceed the value specified	
ESR (100K -300KHz)	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
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
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
	Dissipation Factor	Not to exceed 150% of the value specified

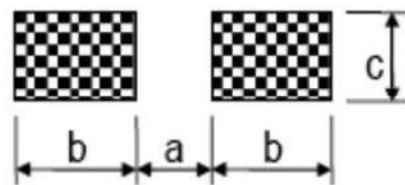
Diagram of Dimensions



(unit: mm)

φD × 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)

φD × 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	1.9
10 × 12.7	4.3	4.4	1.9

» Capacitance List

SIZE \ 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 x 5.8	330~560 μ F	220~330 μ F	180~270 μ F	100~180 μ F	82~120 μ F	47~68 μ F
6.3 x 7.7	560~820 μ F	330~560 μ F	270~390 μ F	150~270 μ F	120~180 μ F	68~100 μ F
6.3 x 9	680~1000 μ F	470~680 μ F	330~470 μ F	220~330 μ F	150~220 μ F	82~120 μ F
6.3 x 10	820~1200 μ F	560~820 μ F	390~560 μ F	270~390 μ F	180~270 μ F	100~150 μ F
8 x 9.2	1000~1800 μ F	680~1200 μ F	470~820 μ F	270~560 μ F	220~390 μ F	100~220 μ F
8 x 12.2	1200~2200 μ F	820~1500 μ F	680~1200 μ F	390~820 μ F	330~560 μ F	180~330 μ F
10 x 10.5	1500~2700 μ F	1000~1800 μ F	680~1200 μ F	470~820 μ F	330~560 μ F	180~330 μ F
10 x 12.7	2200~3900 μ F	1200~2200 μ F	1000~1800 μ F	680~1200 μ F	470~820 μ F	220~470 μ F

» Characteristics List

W.V (V)	Capacitance (μ F)	L.C. (μ A, 2min)	tg δ (120Hz, 20 $^{\circ}$ C)	ESR (m Ω , 100kHz)	Rated Ripple Current (mA, r. m. s)	Size Φ D x L (mm)	Part Number
2.5	560	300	0.08	20	2800	6.3 x 5.8	VF561M2R5E058TR
	680	340	0.08	15	3500	6.3 x 7.7	VF681M2R5E077TR
	820	410	0.08	9	5100	6.3 x 9	VF821M2R5E090TR
	1000	500	0.08	9	5300	6.3 x 10	VF102M2R5E100TR
	1200	600	0.08	9	5300	8 x 9.2	VF122M2R5F092TR
	2200	1100	0.08	9	5700	8 x 12.2	VF222M2R5F122TR
	2700	1350	0.08	9	5500	10 x 10.5	VF272M2R5G105TR
	3300	1650	0.08	8	6100	10 x 12.7	VF332M2R5G127TR
6.3	330	415.8	0.08	20	2800	6.3 x 5.8	VF331M6R3E058TR
	470	592.2	0.08	15	3500	6.3 x 7.7	VF471M6R3E077TR
	560	705.6	0.08	9	5100	6.3 x 9	VF561M6R3E090TR
	680	856.8	0.08	9	5300	6.3 x 10	VF681M6R3E100TR
	820	1033.2	0.08	9	5300	8 x 9.2	VF821M6R3F092TR
	1200	1512	0.08	9	5700	8 x 12.2	VF122M6R3F122TR
	1500	1890	0.08	9	5500	10 x 10.5	VF152M6R3G105TR
	2200	2772	0.08	8	6100	10 x 12.7	VF222M6R3G127TR
10	220	440	0.08	30	2500	6.3 x 5.8	VF221M010E058TR
	330	660	0.08	15	3500	6.3 x 7.7	VF331M010E077TR
	390	780	0.08	9	5100	6.3 x 9	VF391M010E090TR
	470	940	0.08	9	5300	6.3 x 10	VF471M010E100TR
	820	1640	0.08	9	5300	8 x 9.2	VF821M010F092TR
	1000	2000	0.08	9	5700	8 x 12.2	VF102M010F122TR
	1000	2000	0.08	9	5500	10 x 10.5	VF102M010G105TR
	1200	2400	0.08	8	6100	10 x 12.7	VF122M010G127TR
16	100	320	0.10	30	2500	6.3 x 5.8	VF101M016E058TR
	220	704	0.10	20	2900	6.3 x 7.7	VF221M016E077TR
	270	864	0.10	15	3500	6.3 x 9	VF271M016E090TR
	330	1056	0.10	15	3600	6.3 x 10	VF331M016E100TR

W.V. (V)	Capacitance (μ F)	L.C. (μ A, 2min)	$\text{tg } \delta$ (120Hz, 20°C)	ESR ($\text{m}\Omega$, 100kHz)	Rated Ripple Current (mA, r. m. s)	Size Φ D x L (mm)	Part Number
16	470	1504	0.10	16	3800	8 x 9.2	VF471M016F092TR
	560	1792	0.10	15	4600	8 x 12.2	VF561M016F122TR
	680	2176	0.10	15	4300	10 x 10.5	VF681M016G105TR
	1000	3000	0.10	12	5200	10 x 12.7	VF102M016G127TR
25	100	500	0.10	30	1900	6.3 x 5.8	VF101M025E058TR
	100	500	0.10	20	2900	6.3 x 7.7	VF101M025E077TR
	180	900	0.10	18	3000	6.3 x 9	VF181M025E090TR
	220	1100	0.10	18	3100	6.3 x 10	VF221M025E100TR
	330	1650	0.10	18	3300	8 x 9.2	VF331M025F092TR
	470	2350	0.10	15	3900	8 x 12.2	VF471M025F122TR
	560	2800	0.10	16	3700	10 x 10.5	VF561M025G105TR
	680	3000	0.10	15	4300	10 x 12.7	VF681M025G127TR
35	56	392	0.10	40	1800	6.3 x 5.8	VF560M035E058TR
	82	574	0.10	25	2400	6.3 x 7.7	VF820M035E077TR
	100	700	0.10	25	2500	6.3 x 9	VF101M035E090TR
	120	840	0.10	25	2700	6.3 x 10	VF121M035E100TR
	150	1050	0.10	20	3100	8 x 9.2	VF151M035F092TR
	220	1540	0.10	18	3400	8 x 12.2	VF221M035F122TR
	330	2310	0.10	20	3400	10 x 10.5	VF331M035G105TR
	470	3000	0.10	18	3700	10 x 12.7	VF471M035G127TR

» 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