

PM series SMD type & Low Profile

Features

- ◆ SMD type & Low profile
- ◆ Low ESR at high frequency range & Large permissible ripple current.



Specifications

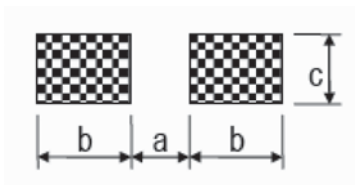
Item	Performance Characteristics	
Operating Temperature Range	-55~+105°C	
Rated Voltage Range	2.5~25 VDC	
Capacitance Range	10 to 560 μF	
Capacitance Tolerance	±20%(120Hz,+20°C)	
Leakage Current (+20°C,max.)	Not to exceed the value specified (μ A, after 2 minutes)	
Dissipation Factor (tan δ , at 20°C , 120Hz)	Not to exceed the value specified	
ESR (100K~300KHz)	Not to exceed 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
	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

Conductive Polymer

Frequency Coefficient for Ripple Current

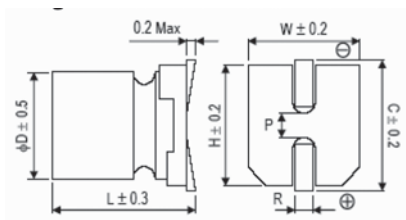
Frequency	120Hz ≤ freq. < 1KHz	1KHz ≤ freq. < 10KHz	10KHz ≤ freq. < 100KHz	100KHz ≤ freq. < 300KHz
Coefficient	0.05	0.3	0.7	1

Recommended land pattern:(unit:mm)



φD×L	a	b	c
4×5.5	1.0	2.6	1.6
5×5.5	1.4	3.0	1.6
6.3×5.8	2.1	3.5	1.6
6.3×7.7	2.1	3.5	1.6

Diagram of Dimensions:(unit:mm)



φD×L	W	H	C	R	P
4×5.5	4.3	4.3	5.1	0.5 to 0.8	1.0
5×5.5	5.3	5.3	5.9	0.5 to 0.8	1.4
6.3×5.8	6.5	6.5	7.2	0.5 to 0.8	2.1
6.3×7.7	6.5	6.5	7.2	0.5 to 0.8	2.1

Dimensions & Characteristics

W.V. (V)	Capacitance (μ F)	L.C. (μ A,2min)	tg δ (120Hz,20°C)	ESR (m Ω ,100KHZ)	Maximum Permissible Ripple Current(mA,r.m.s)	ϕ DxL(mm)
						Size Φ D x L (mm)
2.5	150	300	0.08	30	2200	6.3x5.8
	180	300	0.08	30	2200	6.3x5.8
	220	300	0.08	30	2610	6.3x5.8
	270	300	0.08	25	2610	6.3x5.8
				20	2690	6.3x7.7
	330	300	0.08	25	2610	6.3x5.8
				20	2690	6.3x7.7
	390	300	0.08	25	2610	6.3x5.8
				20	2690	6.3x7.7
470	300	0.08	25	2610	6.3x5.8	
			15	3100	6.3x7.7	
560	300	0.08	25	2610	6.3x5.8	
			15	3100	6.3x7.7	
4	150	300	0.08	30	2200	6.3x5.8
				25	2670	6.3x7.7
	180	300	0.08	30	2200	6.3x5.8
				25	2670	6.3x7.7
	220	300	0.08	25	2610	6.3x5.8
				20	2690	6.3x7.7
	270	300	0.08	25	2610	6.3x5.8
				20	2690	6.3x7.7
	330	300	0.08	20	2690	6.3x5.8
15				3100	6.3x7.7	
390	300	0.08	15	3100	6.3x7.7	
			15	3100	6.3x7.7	
6.3	47	300	0.08	30	1970	5x5.5
				30	1970	5x5.5
	56	300	0.08	30	1970	5x5.5
				20	2690	6.3x5.8
	68	300	0.08	30	1970	5x5.5
				20	2690	6.3x5.8
	82	300	0.08	30	1970	5x5.5
				20	2690	6.3x5.8
	100	300	0.08	25	2390	6.3x5.8
20				2690	6.3x7.7	
150	300	0.08	30	1970	5x5.5	
			25	2390	6.3x5.8	
180	300	0.08	20	2690	6.3x7.7	
			20	2690	6.3x7.7	
220	300	0.08	20	2390	6.3x5.8	
			15	3400	6.3x7.7	
270	300	0.08	20	3000	6.3x5.8	
			15	3400	6.3x7.7	
330	300	0.08	20	3100	6.3x5.8	
			15	3400	6.3x7.7	
390	300	0.08	15	3400	6.3x7.7	
			15	3400	6.3x7.7	
10	10	300	0.08	45	1200	4x5.5
	15	300	0.08	45	1200	4x5.5
	22	300	0.08	45	1200	4x5.5
	33	300	0.08	30	1970	5x5.5
				30	2200	6.3x5.8
	39	300	0.08	30	1970	5x5.5
				30	2200	6.3x5.8
	47	300	0.08	30	1970	5x5.5
				30	2200	6.3x5.8
	56	300	0.08	20	2690	6.3x7.7
				30	1970	5x5.5
	68	300	0.08	30	2200	6.3x5.8
				20	2690	6.3x7.7
	82	300	0.08	30	1970	5x5.5
				30	2200	6.3x5.8
	100	300	0.08	20	2690	6.3x7.7
				30	1970	5x5.5
	150	300	0.08	30	2200	6.3x5.8
				20	2690	6.3x7.7
	180	300	0.08	30	2200	6.3x5.8
				20	2690	6.3x7.7
220	300	0.08	30	1970	5x5.5	
			20	2690	6.3x7.7	
270	300	0.08	20	2690	6.3x5.8	
			20	2690	6.3x7.7	
330	300	0.08	20	2690	6.3x7.7	

Ripple Current (mA, rms) at 105°C, 100KHz

W.V. (V)	Capacitance (μ F)	L.C. (μ A, 2min)	tg δ (120Hz, 20°C)	ESR (m Ω , 100KHZ)	Maximum Permissible Ripple Current(mA, r.m.s)	Size Φ D \times L(mm)
16	10	400	0.08	30	2200	5 \times 5.8
				30	2200	6.3 \times 5.8
				25	2610	6.3 \times 7.7
	15	400	0.08	30	2200	5 \times 5.8
				30	2200	6.3 \times 5.8
				25	2610	6.3 \times 7.7
	22	400	0.08	30	2200	5 \times 5.8
				30	2200	6.3 \times 5.8
				25	2610	6.3 \times 7.7
	33	400	0.08	30	2200	5 \times 5.8
				30	2200	6.3 \times 5.8
				25	2610	6.3 \times 7.7
	39	400	0.08	30	2200	5 \times 5.8
				30	2200	6.3 \times 5.8
				25	2610	6.3 \times 7.7
47	400	0.08	30	2200	6.3 \times 5.8	
			25	2610	6.3 \times 7.7	
			30	2200	6.3 \times 5.8	
56	400	0.08	30	2200	6.3 \times 5.8	
			25	2610	6.3 \times 7.7	
			30	2200	6.3 \times 5.8	
68	400	0.08	30	2200	6.3 \times 5.8	
			20	2690	6.3 \times 7.7	
			30	2200	6.3 \times 5.8	
82	400	0.08	30	2200	6.3 \times 5.8	
			20	2690	6.3 \times 7.7	
			20	2690	6.3 \times 7.7	
100	400	0.08	20	2690	6.3 \times 5.8	
			20	2690	6.3 \times 7.7	
			20	2690	6.3 \times 7.7	
150	400	0.08	20	2690	6.3 \times 7.7	
			30	2200	6.3 \times 5.8	
			30	2670	6.3 \times 7.7	
20	10	600	0.08	30	2200	6.3 \times 5.8
				30	2670	6.3 \times 7.7
				25	2670	6.3 \times 7.7
	15	600	0.08	30	2200	6.3 \times 5.8
				25	2670	6.3 \times 7.7
	22	600	0.08	30	2200	6.3 \times 5.8
				25	2670	6.3 \times 7.7
33	600	0.08	25	2670	6.3 \times 7.7	
			25	2670	6.3 \times 7.7	
39	600	0.08	25	2670	6.3 \times 7.7	
			25	2670	6.3 \times 7.7	
47	600	0.08	25	2670	6.3 \times 7.7	
			25	2670	6.3 \times 7.7	
25	10	600	0.08	30	2200	6.3 \times 5.8
				25	2670	6.3 \times 7.7
	15	600	0.08	30	2200	6.3 \times 5.8
				25	2670	6.3 \times 7.7
	22	600	0.08	30	2200	6.3 \times 5.8
25				2670	6.3 \times 7.7	
33	600	0.08	25	2670	6.3 \times 7.7	
			25	2670	6.3 \times 7.7	

Ripple Current (mA, rms) at 105°C, 100KHz

Size List

ϕ D \times L(mm)

WV (SV) Cap (μ F)	2.5 (2.8)	4 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)	20 (23)	25 (27.5)
10				4 \times 5.5	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7
15				4 \times 5.5	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7
22				4 \times 5.5	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7
33				5 \times 5.5/6.3 \times 5.8	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 7.7
39				5 \times 5.5/6.3 \times 5.8	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 7.7	6.3 \times 7.7
47			5 \times 5.5	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 7.7	
56			5 \times 5.5	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 7.7	
68			5 \times 5.5/6.3 \times 5.8	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7		
82			5 \times 5.5/6.3 \times 5.8	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7		
100			5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7		
150	6.3 \times 5.8	6.3 \times 5.8/6.3 \times 7.7	5 \times 5.5/6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 7.7		
180	6.3 \times 5.8	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7			
220	6.3 \times 5.8	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7			
270	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 7.7			
330	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 7.7			
390	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7					
470	6.3 \times 5.8/6.3 \times 7.7	6.3 \times 5.8/6.3 \times 7.7					
560	6.3 \times 5.8/6.3 \times 7.7						

Ripple Current (mA, rms) at 105°C 100KHz