

## PR series SMD type & Long Life to 5,000Hours



### Features

- ◆ SMD type .
- ◆ Long Life to 5,000Hours.

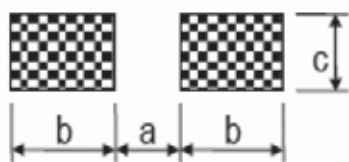
### Specifications

Item	Performance Characteristics	
Operating Temperature Range	-55°C ~ +105°C	
Rated Voltage Range	6.3 ~ 50V DC	
Capacitance Range	10 to 1500 μF	
Capacitance Tolerance	±20% ( 120Hz , +20°C )	
Leakage Current (+20°C, max.)	Not to exceed the values shown in Standard Ratings ( Rated voltage applied, after 2 minutes at 20°C )	
Dissipation Factor (tan δ , at 20°C , 120Hz)	Not to exceed the values shown in Standard Ratings	
ESR ( 100K ~ 300KHz )	Not to exceed the values shown in Standard Ratings	
Endurance 105°C , 5000h , 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

### Frequency Coefficient for Ripple Current

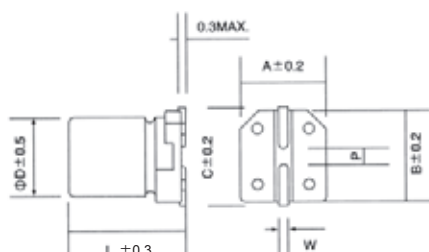
Frequency	120Hz ≤ freq. < 1KHz	1KHz ≤ freq. < 10KHz	10KHz ≤ freq. < 100KHz	100KHz ≤ freq. < 300KHz
Coefficient	0.05	0.3	0.7	1

### Recommended land pattern:(unit:mm)



φ D x L	a	b	c
6.3x5.8	2.1	3.5	1.6
6.3x7.7	2.1	3.5	1.6
8x7.7	2.8	4.2	1.9
8x8.7	2.8	4.2	1.9
8x11.7	2.8	4.2	1.9
10x8.7	4.3	4.4	1.9
10x10.5	4.3	4.4	1.9
10x12.4	4.3	4.4	1.9

### Diagram of Dimensions:(unit:mm)



φ D x L	W	H	C	R	P
6.3x5.8	6.5	6.5	7.2	0.5 to 0.8	2.2
6.3x7.7	6.5	6.5	7.2	0.5 to 0.8	2.2
8x7.7	8.3	8.3	9.0	0.7 to 1.1	3.1
8x8.7	8.3	8.3	9.0	0.7 to 1.1	3.1
8x11.7	8.3	8.3	9.0	0.7 to 1.1	3.1
10x8.7	10.3	10.3	11.0	0.7 to 1.1	4.5
10x10.5	10.3	10.3	11.0	0.7 to 1.1	4.5
10x12.4	10.3	10.3	11.0	0.7 to 1.1	4.5

## Standard Ratings

W.V. (V)	Cap(μF)	Size φ DxL(mm)	L.C. (μA,2min)	tg δ (120Hz,20°C)	ESR (mΩ),100KHz)	Maximum Permissible Ripple Current(mA,r.m.s)
6.3	100	6.3x5.8	300	0.08	32	2300
	220	6.3x5.8	300	0.08	32	2300
		6.3x5.8	300	0.08	20	2800
	270	6.3x7.7	340.2	0.08	22	3000
	470	8x7.7	592.2	0.08	22	3700
	820	8x11.7	1033.2	0.08	12	5000
	1000	10x10.5	1260	0.08	15	4700
10	1500	10x12.4	1890	0.08	12	5300
	56	6.3x5.8	300	0.08	32	2300
	120	6.3x7.7	300	0.08	22	2900
	150	6.3x7.7	300	0.08	22	2900
	180	6.3x7.7	360	0.08	22	2900
	270	8x7.7	540	0.08	22	3200
	330	10x8.7	660	0.08	22	3700
	470	8x11.7	940	0.08	12	4500
	560	10x10.5	1120	0.08	15	4200
	820	10x12.4	1640	0.08	12	4800
16	1000	10x12.4	2000	0.08	12	4800
	47	6.3x5.8	400	0.10	48	1700
	82	6.3x7.7	400	0.10	28	2400
	100	6.3x7.7	400	0.10	28	2400
	120	6.3x7.7	400	0.12	28	2400
		8x7.7	400	0.12	28	3000
	150	8x8.7	480	0.12	26	3100
		10x8.7	480	0.12	33	3100
	180	8x11.7	576	0.12	18	4200
		10x8.7	576	0.12	33	3100
	220	8x11.7	704	0.12	18	4200
	270	10x10.5	864	0.12	23	3800
	330	10x10.5	1056	0.12	23	3800
	390	10x12.4	1248	0.12	18	4500
	560	10x12.4	1792	0.12	18	4500
680	10x12.4	2176	0.12	18	4500	
20	22	6.3x5.8	600	0.10	48	1700
	33	6.3x5.8	600	0.10	48	1700
	47	6.3x7.7	600	0.10	33	2300
	56	6.3x7.7	600	0.10	33	2300
	68	6.3x7.7	600	0.10	33	2300
	82	8x7.7	600	0.12	33	2900
	120	8x7.7	600	0.12	33	2900
	150	8x11.7	600	0.12	23	4000
	180	8x11.7	720	0.12	23	4000
		10x10.5	720	0.12	25	3650
	220	10x10.5	880	0.12	25	3650
	330	10x12.4	1320	0.12	23	4200

Ripple Current(mA,rms)at 105°C,100KHz

W.V. (V)	Cap(μF)	Size φ DxL(mm)	L.C. (μA,2min)	tg δ (120Hz,20°C)	ESR (mΩ),100KHz)	Maximum Permissible Ripple Current(mA,r.m.s)
25	10	6.3x5.8	600	0.10	58	1600
	22	6.3x5.8	600	0.10	58	1600
	39	6.3x7.7	600	0.10	33	2300
	47	6.3x7.7	600	0.10	33	2300
		8x11.7	600	0.12	23	3700
	56	8x7.7	600	0.12	33	2900
	68	8x7.7	600	0.12	33	2900
		8x11.7	600	0.12	23	4000
	82	8x8.7	600	0.12	27	3200
		8x11.7	600	0.12	23	4000
		10x8.7	600	0.12	33	2900
	100	6.3x7.7	600	0.12	40	2000
		8x8.7	600	0.12	27	3200
	120	8x11.7	600	0.12	23	4000
		10x10.5	600	0.12	25	3650
150	10x12.4	750	0.12	23	4200	
180	10x12.4	900	0.12	23	4200	
220	8x11.7	1100	0.12	23	4000	
	10x12.4	1100	0.12	23	4200	
35	10	6.3x5.8	600	0.12	75	980
	18	6.3x7.7	600	0.12	60	1400
	22	8x11.7	600	0.12	35	2300
	27	6.3x7.7	600	0.12	60	1400
	33	8x11.7	600	0.12	35	2300
	39	8x8.7	600	0.12	40	1800
	56	8x11.7	600	0.12	35	2300
	68	10x10.5	600	0.12	32	2500
	100	10x10.5	700	0.12	32	2500
		10x12.4	700	0.12	30	3100
	150	10x10.5	700	0.12	32	2500
10x12.4		700	0.12	30	3100	
50	10	8x7.7	100	0.12	75	1400
	12	6.3x7.7	120	0.12	75	1400
	22	8x8.7	220	0.12	50	1800
		8x11.7	220	0.12	40	2400
		10x8.7	220	0.12	55	1800
	27	8x11.7	270	0.12	40	2400
	33	10x10.5	330	0.12	42	2200
		10x12.4	330	0.12	30	3000
	47	10x12.4	470	0.12	30	3000
	56	10x12.4	560	0.12	30	3000
68	10x12.4	680	0.12	30	3000	
100	10x12.4	1000	0.12	26	3650	

Ripple Current(mA,rms)at 105°C,100KHz