

SPB Series (High Reliability, Ultra small, Ultra-low ESR)

- High ripple current capability.
- High Endurance : 5,000 hours at 105°C
- High temperature resistance (-55°C to +105°C)
- RoHS Compliance (2011/65/EU)



SPECIFICATIONS

Table-1

Items	Test Conditions	Characteristics	
Category temperature range	-	-55°C to +105°C	
Capacitance Tolerance	At 20°C, 120Hz	M:±20%	
Dissipation Factor (tan δ)	At 20°C, 120Hz	≤ The value of table-3	
Leakage Current	At 20°C After 2 minites	≤ I = 0.2CV (I= MAX Leakage Current, C=Capacitance, V=Rated Voltage)	
ESR	At 100K Hz, 20°C	≤ The value of table-3	
Characteristics of impedance ratio at high temp. and low temp.	At 100KHz	$Z(-55^{\circ}\text{C}) / Z(+20^{\circ}\text{C}) \leq 1.25$	
Endurance (High Temp Load Test)	When the capacitors are restored to 20°C after the rated voltage applied for 5,000 hours at 105°C	ΔC/C	Within ±20 % of the initial value
		D.F. (Tan-δ)	≤150 % of the initial specified value
		ESR	≤150 % of the initial specified value
		Leakage Current	Within the initial specified value
Humidity Bias Test (High Temp Non-Load Test)	When the capacitors are restored to 20°C after subjecting them to DC voltage at 60°C, 90% ~ 95% RH for 1,000 hours	ΔC/C	Within ±20 % of the initial value
		D.F. (Tan-δ)	≤150 % of the initial specified value
		ESR	≤150 % of the initial specified value
		Leakage Current	Within the initial specified value
Resistance to Soldering Heat	After soldering the capacitor under the soldering conditions prescribed here as preheat at 150 to 200°C for 60 to 180 seconds and peak temperature at 265°C for 10 seconds or less, the capacitor shall meet the specifications listed at right, provided that its temperature profile is measured at both of terminal ends facing the soldering side.	ΔC/C	Within ±20 % of the initial value
		D.F. (Tan-δ)	≤130 % of the initial specified value
		ESR	≤150 % of the initial specified value
		Leakage Current	Within the initial specified value

Dimensions

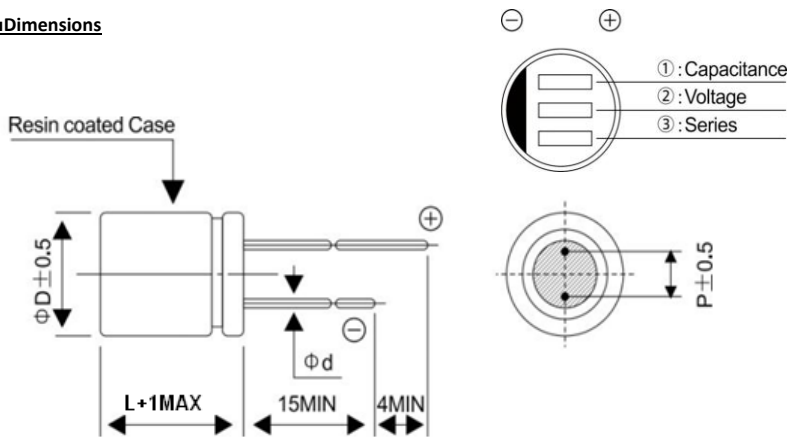


Table-2

Size code	D±0.5	F±0.5	d±0.05
8L	5.0	2.0	0.50
8L	6.3	2.5	0.60
9L	6.3	2.5	0.60
12L	6.3	2.5	0.60
8L	8.0	3.5	0.60
11L	8.0	3.5	0.60
12.5L	10.0	5.0	0.60

Unit:(mm)

Φ5mm d=0.50mm
6.3mm/8mm: d=0.60mm
Φ10mm d=0.60mm

Table-3 SPB Serise Characteristics List

Size Code	Rated Voutage (V)	Rated Capacitance (μF)	ESR 100KHz /20°C (mΩ max)	Rated ripple current 100KHz/105°C(mA.rms)	Dissipation Factor (max)/120Hz	Leakage current (μA) (max)/2min
5x8	6.3	270	7.5	3,980	0.08	340
5x8		330	7.5	4,400	0.08	415
6.3x8		330	7.5	4,800	0.08	415
6.3x8		470	8.0	5,800	0.08	592
6.3x8		560	8.0	5,900	0.08	705
6.3x9		680	8.0	5,900	0.08	856
6.3x8		820	9.0	6,100	0.08	1033
6.3x9		820	9.0	6,100	0.08	1033
8x8		1000	9.0	6,300	0.08	1260
8x11		1200	9.0	6,500	0.08	1520

Size Code	Rated Voutage (V)	Rated Capacitance (μF)	ESR 100KHz /20°C (mΩ max)	Rated ripple current 100KHz/105°C(mA.rms)	Dissipation Factor (max)/120Hz	Leakage current (μA) (max)/2min
6.3x9	10	47	25.0	2,900	0.08	94
6.3x10.5		68	25.0	3,000	0.08	136
6.3x10.5		100	25.0	3,000	0.08	200
6.3x10.5		150	25.0	3,000	0.08	300
8x12		270	8.0	4,900	0.08	540
6.3x11		330	8.0	5,300	0.08	660
10x13		470	7.0	5,700	0.08	940
10x13		560	7.0	5,900	0.08	1120
10x13		680	7.0	6,100	0.08	1360
5x8	16	100	9.0	2,600	0.08	320
6.3x8		100	9.0	2,600	0.08	320
6.3x8		150	9.0	2,800	0.08	480
6.3x8		220	9.0	3,100	0.08	704
8x8		270	10.0	5,000	0.08	864
6.3x9		330	10.0	5,000	0.08	1056
8x8		330	10.0	5,000	0.08	1056
8x8		470	10.0	5,200	0.08	1504
8x11		470	10.0	5,400	0.08	1504
8x11		560	10.0	5,400	0.08	1792
8x11		680	10.0	5,400	0.08	2176
8x12		820	10.0	5,700	0.08	2624
10x12		820	10.0	6,000	0.08	2624
10x12.5		1000	10.0	6,000	0.08	3200