

SPB series

- Low ESR.
- High Voltage, Long Life.
- 125°C, 2,000~4,000hrs.
- RoHS compliant
- For automotive mouldles and other high temperature applications



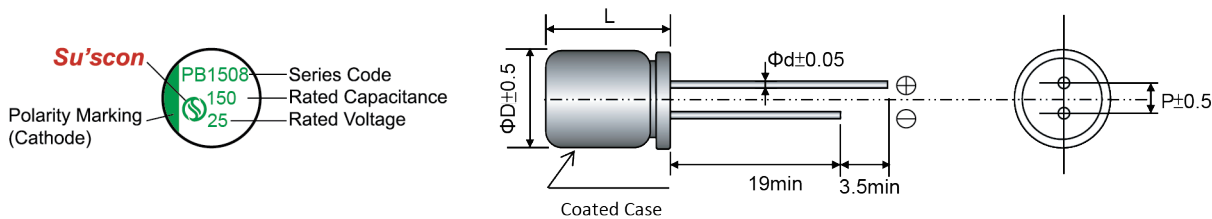
SPB

SPECIFICATIONS

Items	Conditions	Characteristics
Category Temperature Range	—	-55 to +125°C
Rated Voltage Range	—	16 ~ 50V
Capacitance Tolerance	at 20°C,120Hz	±20%(M)
Surge Voltage	at 15 ~ 35°C	Rated voltage ×1.25V
Leakage Current	at 20°C after 2 minutes	$I \leq 0.01CV$ or $3(\mu A)$ Whichever is greater measured,after 2 minutes application of rated working voltage at +20°C. Please see the attached characteristics list
Dissipation Factor ($\tan \delta$)	at 20°C,120Hz	Please see the attached characteristics list
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 to 4,000 hours at 125°C. $\Phi 6.3=2,000hrs,D \geq \Phi 8=4,000hrs.$	Appearance NO significant damage.
		Capacitance change $\leq \pm 30\%$ of the initial value.
		DF ($\tan \delta$) $\leq 200\%$ of the initial specified value.
		ESR $\leq 200\%$ of the initial specified value.
		Leakage current $\leq$ The initial specified value.
Damp Heag (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to store at 60°C, 90 to 95% RH for 1,000 hours, without DC applied.	Appearance NO significant damage.
		Capacitance change $\leq \pm 30\%$ of the initial value.
		DF ($\tan \delta$) $\leq 200\%$ of the initial specified value.
		ESR $\leq 200\%$ of the initial specified value.
		Leakage current $\leq$ The initial specified value.
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 15~35°C for 30 seconds through aprotective resistor (R = 1 kΩ) and discharge for 5 minutes 30 seconds.	Appearance NO significant damage.
		Capacitance change $\leq \pm 30\%$ of the initial value.
		DF ($\tan \delta$) $\leq 200\%$ of the initial specified value.
		ESR $\leq 200\%$ of the initial specified value.
		Leakage current $\leq$ The initial specified value.

※ Note : If any doubt arises, measure the leakage current after following voltage treatment.
Voltage treatmen : DC rated voltage are applied to the capacitors for 120 minutes at 125°C.

MARKING AND DIMENSIONS



(Unit:mm)

Size Code	6.3x7.2	8x9.5	10x9.5	10x11.5
ϕD	6.3	8.0	10.0	10.0
L	L+1.5max	L+1.5max	L+1.5max	L+1.5max
ϕd	0.5	0.6	0.6	0.6
P	2.5	3.5	5.0	5.0

SPB SERIES STANRD CHARACTERISITICS LIST

Rated voltage (S.V.)	Cap (μF)	Size Code DxL	Leakage current (μA) max.	ESR (mΩ) max. 100k to 300kHz / 20°C	Rated Ripple Current (mA rms) 100kHz / 125°C	D.F. (tanδ) max. 120Hz / 20°C
16 (20)	120	6.3×7.2	19	40	1,100	0.16
	270	8×9.5	43	26	1,500	0.16
	470	10×9.5	75	21	2,000	0.16
	560	10×11.5	90	15	2,300	0.16
25 (32)	68	6.3×7.2	17	45	1,000	0.16
	150	8×9.5	38	27	1,300	0.16
	270	10×9.5	68	22	1,500	0.16
	330	10×11.5	83	16	1,700	0.16
35 (44)	47	6.3×7.2	16	60	900	0.16
	100	8×9.5	35	30	1,200	0.16
	150	10×9.5	53	23	1,400	0.16
	220	10×11.5	77	17	1,600	0.16
40 (50)	27	6.3×7.2	11	70	900	0.16
	56	8×9.5	22	32	1,200	0.16
	100	10×9.5	40	24	1,400	0.16
	120	10×11.5	48	18	1,600	0.16
50 (63)	15	6.3×7.2	8	80	800	0.16
	33	8×9.5	17	35	1,100	0.16
	56	10×9.5	28	25	1,300	0.16
	82	10×11.5	41	19	1,500	0.16

Frequency Coefficient of Permissible Ripple Current

Frequency (Hz)	100 ≦ F < 1K	1K ≦ F < 10K	10K ≦ F < 100K	100K ≦ F
Capacitance (μF)				
4.7 < C ≦ 33	0.05	0.32	0.67	1.00
33 < C	0.10	0.35	0.70	1.00