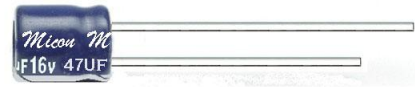


SP series 5mm, Non-polar 85°C

Features

- ◆ Non-polarized with 5 mm for crossover networks of height-pitched, Mean and low pitched sounds in high-fidelity sound systems.
- ◆ The series offers excellent frequency characteristics and minimal Capacitance deviation with frequency.
- ◆ For detail specifications, please refer to Engineering Bulletin No.E118
- ◆ RoHS Compliant



Specifications

Item	Performance Characteristics						
Operating Temperature Range	-40 to +185°C						
Rate Voltage Range	6.3 to 50VDC						
Capacitance Range	0.1 to 47 μF						
Capacitance Tolerance	±20% (120Hz, +20°C)						
Leakage current (+20°C, max.)	I ≤ 0.05 CV 10 (μA)						
	After 2 minutes, whichever is greater measured with rated working voltage applied						
Dissipation fact (tgδ, at 20°C, 120Hz)	Working Voltage(VDC)	6.3	10	16	25	35	50
	D.F.(%)max	24	20	17	17	15	15
Low Temperature Characteristics (120Hz)	Impedance ratio max.						
	Working Voltage(VDC)	6.3	10	16	25	35	50
	Z-25°C/ Z+20°C	4	3	2	2	2	2
	Z-40°C/ Z+20°C	8	6	4	4	3	3
Load Life	Test conditions						
	Duration time	: 1000Hrs					
	Ambient temperature	: +85°C					
	Applied voltage	: Rated DC working voltage to each polarity for 500 Hrs					
	After test requirement at +20°C						
	Capacitance change	: ≤±20% of the initial measured value(4v : ≤±30%)					
	Dissipation factor	: ≤200% of the initial specified value					
	Leakage current	: ≤The initial specified value					
Shelf Life	Test conditions						
	Duration time	: 1000Hrs					
	Ambient temperature	: +85°C					
	Applied voltage	: None					
	After test requirement at +20°C	: Same limits as Load life.					
	Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes						

Multiplier for Ripple Current vs. Frequency

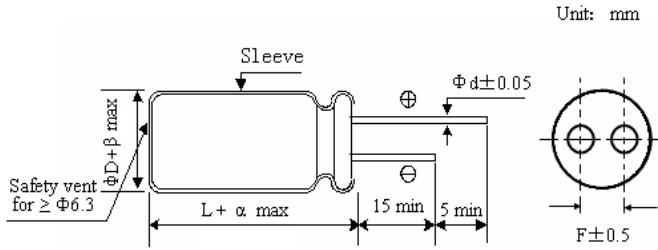
CAP(μF)	50(60)	120	400	1k	10k	50k-100k
Frequency (Hz)						
CAP ≤ 10	0.8	1	1.30	1.45	1.65	1.70
10 < CAP ≤ 100	0.8	1	1.23	1.36	1.48	1.53
100 < CAP ≤ 1000	0.8	1	1.16	1.25	1.35	1.38

Multiplier for Ripple Current vs. Temperature

Temperature °C	45	60	70	85	105
Factor	1.80	1.50	1.45	1.30	1.00

SP series

Diagram of Dimensions



ΦD	5	6.3	8	10	13	16	18	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	12.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	1.0
α	(L < 20) + 1.5				(L ≥ 20) + 2.0				
β	(D < 20) + 0.5				(D ≥ 20) + 1.0				

Standard Ratings

Voltage	6.3V		10V		16V	
	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
0.1						
0.22						
0.33						
0.47						
1						
2.2						
3.3					4×5	10
4.7					4×5	12
10	4×5	15	4×5	16	5×5	23
			5×5	18		
22	5×5	27	6.3×5	32	6.3×5	36
33	6.3×5	35	6.3×5	40	6.3×5	47
47	6.3×5	44				

Voltage	25V		35V		50	
	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
0.1					4×5	1
0.22					4×5	2
0.33					4×5	2.8
0.47					4×5	4
1					4×5	8
2.2			4×5	8.5	5×5	13
3.3	5×5	13	5×5	14	5×5	15
4.7	5×5	15	5×5	16	6.3×5	18
10	6.3×5	25	6.3×5	28		
22						
33						
47						

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