

# SMH

## +105°C General Purpose Surface Mount Chip Aluminum Electrolytic Capacitors



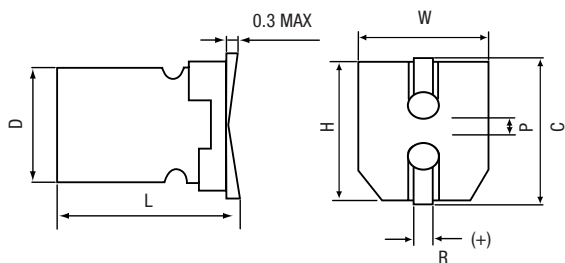
### FEATURES

- Wide Capacitance Range .1 to 1000  $\mu$ F
- Operating Voltage Range: 6.3 WVDC to 50WVDC
- Extended Life

### SPECIFICATIONS

Capacitance Tolerance	$\pm 20\%$ at 120Hz								
Operating Temperature Range	$-55^{\circ}\text{C}$ to $+105^{\circ}\text{C}$								
Dissipation Factor 120Hz, 20°C (Max)	6.3	10	16	25	35	50			
	.3	.22	.18	.14	.12	.12			
Leakage current	Time	2 minutes							
		.01 CV or 3 $\mu$ A, whichever is greater							
Impedance Ratio at Low Temperature (120Hz)		6.3	10	16	25	35		50	
	$-25^{\circ}\text{C}/20^{\circ}\text{C}$	4	3	2	2	2		2	
	$-40^{\circ}\text{C}/20^{\circ}\text{C}$	8	6	4	4	3		3	
Load Life	1,000 hours at 105°C with rated voltage								
	Capacitance change Dissipation factor Leakage current							$\leq 25\%$ of initial measured values $\leq 200\%$ initial specified value $\leq 100\%$ Initial specified value	
Shelf Life	1000 hours at 105°C with no voltage applied. Units will meet load life specifications.								
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.								
	Capacitance change Dissipation factor Leakage current						$\leq 10\%$ of the initial measured value $\leq 100\%$ of specified value $\leq 100\%$ of specified value		
Ripple Current Multipliers	Frequency					Temperature			
	50	120	400	1K	10K	100K	105°C	85°C	70°C
	.8	1.0	1.0	1.1	1.3	1.5	1.0	1.7	2.0

### DIMENSIONS



D $\pm 0.5$ MAX	L	W $\pm 0.2$	H $\pm 0.2$	C $\pm 0.2$	R	P $\pm 0.2$
4	5.4 $\pm 0.1/-0.2$	4.3	4.3	5.0	0.5~0.8	1.0
5	5.4 $\pm 0.1/-0.2$	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.4 $\pm 0.1/-0.2$	6.6	6.6	7.3	0.5~0.8	2.2
6.3	5.8 $\pm 0.3$ MAX	6.6	6.6	7.3	0.5~0.8	2.2
6.3	7.7 $\pm 0.3$ MAX	6.6	6.6	7.3	0.5~0.8	2.2
8	10.2 $\pm 0.3$ MAX	8.3	8.3	9.0	0.7~1.0	3.2
10	10.2 $\pm 0.5$ MAX	10.3	10.3	11.0	0.7~1.0	4.6

(mm)



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## STANDARD PART LISTING

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum E.S.R. Ω 120Hz, +20°C	Maximum RMS Ripple Current (mA) at 120 Hz, +105°C	Dimensions DxL (mm)
0.1	50	104SMH050M	1989.437	2.3	4x5.4
0.22	50	224SMH050M	904.289	3.4	4x5.4
0.33	50	334SMH050M	602.860	4.1	4x5.4
0.47	50	474SMH050M	423.284	4.9	4x5.4
1	50	105SMH050M	198.944	7	4x5.4
2.2	50	225SMH050M	90.429	11	4x5.4
3.3	50	335SMH050M	50.238	13	4x5.4
4.7	35	475SMH035M	49.383	14	4x5.4
4.7	50	475SMH050M	42.328	18.1	5x5.4
10	16	106SMH016M	33.157	18	4x5.4
10	35	106SMH035M	23.210	21	5x5.4
10	50	106SMH050M	19.894	31	6.3x5.4
22	6.3	226SMH6R3M	21.100	22	4x5.4
22	16	226SMH016M	15.071	30	5x5.4
22	35	226SMH035M	10.550	38	6.3x5.4
22	50	226SMH050M	9.043	32	6.3x5.8
33	10	336SMH010M	12.057	30	5x5.4
33	25	336SMH025M	8.038	44	6.3x5.4

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum E.S.R. Ω 120Hz, +20°C	Maximum RMS Ripple Current (mA) at 120 Hz, +105°C	Dimensions DxL (mm)
33	35	336SMH035M	7.033	42	6.3x5.8
33	50	336SMH050M	6.029	60	6.3x7.7
47	6.3	476SMH6R3M	8.466	36	5x5.4
47	16	476SMH016M	7.055	50	6.3x5.4
47	35	476SMH035M	4.938	49	6.3x5.8
47	50	476SMH050M	4.233	63	6.3x7.7
100	6.3	107SMH6R3M	4.642	60	6.3x5.4
100	16	107SMH016ML6	3.316	65	6.3x5.8
100	50	107SMH050M	1.989	140	8x10.2
150	10	157SMH010M	2.653	62	6.3x5.8
150	16	157SMH016M	2.100	95	6.3x7.7
220	16	227SMH016M	1.507	105	6.3x7.7
220	25	227SMH025ML10	1.206	180	10x10.2
330	6.3	337SMH6R3M	1.407	105	6.3x7.7
330	16	337SMH016ML10	1.005	195	10x10.2
330	25	337SMH025M	0.804	220	8x10.2
470	16	477SMH016M	0.705	230	8x10.2
1000	6.3	108SMH6R3M	0.464	230	8x10.2

## PHYSICAL DIMENSIONS

WVDC (V) / Capacitance (µF)	6.3 (7.9)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1						4x5.4
0.22						4x5.4
0.33						4x5.4
0.47						4x5.4
1						4x5.4
2.2						4x5.4
3.3						4x5.4
4.7					4x5.4	5x5.4
10			4x5.4		5x5.4	6.3x5.4
22	4x5.4		5x5.4		6.3x5.4	6.3x5.8
33		5x5.4		6.3x5.4	6.3x5.8	6.3x7.7
47	5x5.4		6.3x5.4		6.3x5.8	6.3x7.7
100	6.3x5.4		6.3x5.8			8x10.2
150		6.3x5.8	6.3x7.7			
220			6.3x7.7	10x10.2		
330	6.3x7.7		10x10.2	8x10.2		
470			8x10.2			
1000	8x10.2					

D x L(mm)