

SMH

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



"NEW EXPANDED SELECTION"

FEATURES

- Wide Capacitance Range .1 to 1,500 μF
 - Solvent Proof
- Operating Voltage Range: 6.3 WVDC to 400 WVDC
 - Extended Life

SPECIFICATIONS

Capacitance Tolerance		$\pm 20\%$ at 120Hz											
Operating Temperature Range		-55°C to +105°C						-40°C to +105°C					
Dissipation Factor 120Hz, 20°C (Max) $\tan \delta$	WVDC	6.3	10	16	25	35	50	63	100	160	200	250	400
	D=4-6.3	.24	.20	.16	.14	.12	.10	.12	.10	-	-	-	-
	D=8,10	.28	.24	.20	.16	.14	.12	.12	.10	.20	.20	.20	.25
Note: For above D.F. specifications, add .02 for every 1000 μF above 1000 μF													
Leakage current	Time	2 minutes						2 minutes					
		.01 CV or 3 μA , whichever is greater						CV 1000; 0.03CV +15 μA CV>1000; 0.02CV +25 μA					
Impedance Ratio at Low Temperature (120Hz)		6.3	10	16	25	35	50	63	100	160	200	250	400
	-25°C/20°C	-	-	-	-	-	-	-	-	3	3	3	6
	-40°C/20°C	3	3	2	2	2	2	2	3	6	6	6	10
	-55°C/20°C	8	5	4	3	3	3	3	-	-	-	-	-
Load Life	2,000 hours at 105°C with rated voltage (D 6.3, 1,000 hrs.)												
	Capacitance change Dissipation factor Leakage current							25% of initial measured values 200% initial specified value 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							10% of the initial measured value 100% of specified value 100% of specified value					

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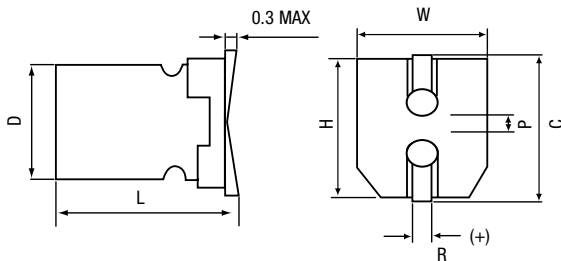
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PHYSICAL DIMENSIONS

WVDC (V) / (μF)	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	400 (450)
0.1							4x5.4					
0.22							4x5.4					
0.33							4x5.4					
0.47							4x5.4					
1						4x5.4	4x5.4	4x6				
2.2						4x5.4	4x5.4	6.3x6				8x10.5
3.3						4x5.4	5x5.4	6.3x6			8x10.5	10x10.5
4.7						4x5.4	5x5.4	6.3x6			8x10.5	10x10.5
10		4x5.4			5x5.4	6.3x5.4	6.3x5.4	6.3x7.7	8x10.5	10x10.5		
22	4x5.4		5x5.4		6.3x5.4	6.3x6	6.3x7.7	8x10.2				
33		5x5.4		6x5.4	6.3x6	6.3x7.7	8x10.2	10x10.2				
47	5x5.4		6.3x5.4		6.3x6	6.3x7.7	8x10.2					
100			6.3x5.4		6.3x7.7	8x10.2	10x10.2					
150		6.3x6	6.3x7.7		8x10.2							
150					10x7.7							
220	6.3x6		6.3x7.7	10x7.7	8x10.2	10x10.2						
330	6.3x7.7		10x7.7	8x10.2	10x10.2							
470		10x7.7	8x10.2	10x10.2								
680	10x7.7		10x10.2									
1000	8x10.2	10x10.2										
1500	10x10.2											

D x L (mm)

DIMENSIONS



D _{+0.5 MAX}	L	W _{+0.2}	H _{+0.2}	C _{+0.2}	R	P _{+0.2}
4	5.4 _{+0.1/-0.2}	4.3	4.3	5.0	0.5~0.8	1.0
5	5.4 _{+0.1/-0.2}	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.4 _{+0.1/-0.2}	6.6	6.6	7.3	0.5~0.8	2.2
6.3	6.0 _{+0.3 MAX}	6.6	6.6	7.3	0.5~0.8	2.2
6.3	7.7 _{+0.3 MAX}	6.6	6.6	7.3	0.5~0.8	2.2
8	10.2 _{+0.3 MAX}	8.3	8.3	9.0	0.7~1.0	3.2
8	10.5 _{+0.3 MAX}	8.3	8.3	9.0	0.7~1.0	3.2
10	7.7 _{+0.3 MAX}	10.3	10.3	11.0	0.7~1.0	4.6
10	10.2 _{+0.3 MAX}	10.3	10.3	11.0	0.7~1.0	4.6
10	10.5 _{+0.3 MAX}	10.3	10.3	11.0	0.7~1.0	4.6

(mm)

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	63	104SMH063M	1989.44	0.7	4x5.4
0.22	63	224SMH063M	904.29	1.4	4x5.4
0.33	63	334SMH063M	602.86	2.1	4x5.4
0.47	63	474SMH063M	423.28	3.5	4x5.4
1	50	105SMH050M	165.79	7	4x5.4
1	63	105SMH063M	198.94	7	4x5.4
1	100	105SMH100M	165.8	7	4x6
2.2	50	225SMH050M	75.36	11	4x5.4
2.2	63	225SMH063M	90.43	11	4x5.4
2.2	100	225SMH100M	75.36	14	6.3x6
2.2	400	225SMH400M	226.07	25	8x10.5
3.3	50	335SMH050M	50.24	13	4x5.4
3.3	63	335SMH063M	60.29	14	5x5.4
3.3	100	335SMH100M	50.24	20	6.3x6
3.3	250	335SMH250M	120.57	31	8x10.5
3.3	400	335SMH400M	150.71	36	10x10.5
4.7	35	475SMH035M	42.33	14	4x5.4
4.7	50	475SMH050M	35.27	16	6.3x5.4
4.7	63	475SMH063M	42.33	16	5x5.4
4.7	100	475SMH100M	3.207	25	6.3x6
4.7	250	475SMH250M	84.66	37	8x10.5
4.7	400	475SMH400M	105.82	38	10x10.5
10	16	106SMH016M	26.53	18	4x5.4
10	35	106SMH035M	19.89	21	5x5.4
10	50	106SMH050M	16.58	24	6.3x5.4
10	63	106SMH063M	19.89	24	6.3x5.4
10	100	106SMH100M	16.57	35	6.3x7.7
10	160	106SMH160M	397.89	57	8x10.5
10	200	106SMH200M	397.89	64	10x10.5
22	6.3	226SMH6R3M	18.09	22	4x5.4
22	16	226SMH016M	12.06	27	5x5.4
22	35	226SMH035M	9.04	38	6.3x5.4
22	50	226SMH050M	7.54	32	6.3x6
22	63	226SMH063M	9.04	49	6.3x7.7
22	100	226SMH100M	7.54	84	8x10.2
33	10	336SMH010M	10.05	30	5x5.4

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	25	336SMH025M	7.03	44	6.3x5.4
33	35	336SMH035M	6.03	42	6.3x6
33	50	336SMH050M	5.02	60	6.3x7.7
33	63	336SMH063M	6.03	112	8x10.2
33	100	336SMH100M	5.02	133	10x10.2
47	6.3	476SMH6R3M	8.47	33	5x5.4
47	16	476SMH016M	5.64	48	6.3x5.4
47	35	476SMH035M	4.23	49	6.3x6
47	50	476SMH050M	3.53	63	6.3x7.7
47	63	476SMH063M	4.23	119	8x10.2
100	16	107SMH016M	2.65	60	6.3x5.4
100	35	107SMH035M	1.99	84	6.3x7.7
100	50	107SMH050M	1.99	140	8x10.2
100	63	107SMH063M	1.99	196	10x10.2
150	10	157SMH010M	2.21	62	6.3x6
150	16	157SMH016M	1.77	95	6.3x7.7
150	35	157SMH035MD8	1.55	155	8x10.2
150	35	157SMH035M	1.55	155	10x7.7
220	6.3	227SMH6R3M	0.217	67	6.3x6
220	16	227SMH016M	1.21	105	6.3x7.7
220	25	227SMH025M	1.21	175	10x7.7
220	35	227SMH035M	1.06	190	8x10.2
220	50	227SMH050M	0.904	220	10x10.2
330	6.3	337SMH6R3M	1.21	105	6.3x7.7
330	16	337SMH016M	1	195	10x7.7
330	25	337SMH025M	0.804	220	8x10.2
330	35	337SMH035M	0.704	300	10x10.2
470	10	477SMH010M	0.85	210	10x7.7
470	16	477SMH016M	0.706	230	8x10.2
470	25	477SMH025M	0.564	300	10x10.2
680	6.3	687SMH6R3M	0.683	210	10x7.7
680	16	687SMH016M	0.488	310	10x10.2
1000	6.3	108SMH6R3M	0.464	230	8x10.2
1000	10	108SMH010M	0.398	310	10x10.2
1500	6.3	158SMH6R3M	0.31	310	10x10.2

