SML

+ 85°C General Purpose Surface Mount Chip Aluminum Electrolytic Capacitors



FEATURES

- *Wide Capacitance Range (.1 to 1,000 µF)*
- *Standard Case Sizes*
- *Solvent Proof*
- *Operating Voltage Range: 4WVDC to 100 WVDC*

SPECIFICATIONS

Capacitance Tolerance		**±20% at 120Hz, 20°C**								
Operating Temperature Range		**-40°C to +85°C**								
Dissipation Factor 120Hz, 20°C (Max) tan δ		4	6.3	10	16	25	35	50	63	100
		.35	.28	.24	.20	.14	.14	.12	.12	.10
Leakage current	**Time**	2 minutes								
	L.C.	.01 CV or 3µA, whichever is greater								
Impedance Ratio at Low Temperature (120Hz)	**-25°C/20°C**	7	4	3	2	2	2	2	2	2
	-40°C/20°C	15	8	6	4	4	4	3	3	3
Load Life	2,000 hours at 85°C with rated voltage									
	Capacitance change Dissipation factor Leakage current	≤ 25% of initial measured values ≤ 200% initial specified value ≤100% Initial specified value								
Shelf Life	1000 hours at 85°C with no applied voltage.									
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 ≤ The initial specified value ≤ The Initial specified value								
Ripple Current Multipliers	Frequency (Hz)						Temperature			
	50	120	400	1K	10K	100K	85°C	70°C	65°C	
	.8	1.0	1.0	1.1	1.3	1.5	1.0	1.35	1.35	

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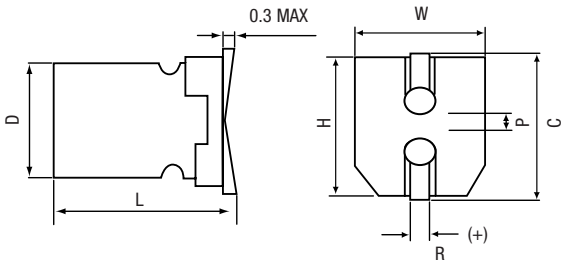
PHYSICAL DIMENSIONS

WVDC (SV) / (µF)	4 (5.2)	6.3 (7.9)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)
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	→	6.3x5.8
4.7	→	→	→	→	→	4x5.4	4x5.4 5x5.4	→	8x10.2
10	→	→	→	4x5.4	→	4x5.4 5x5.4	5x5.4 6.3x5.4	→	8x10.2
22	→	4x5.4	→	4x5.4 5x5.4	5x5.4	6.3x5.4	6.3x5.4	8x10.2	8x10.2
33	4x5.4	→	5x5.4 4x5.4	→	5x5.4 6.3x5.4	6.3x5.8	6.3x7.7 8x6.2	8x10.2	10x10.2
47	4x5.4	4x5.4 5x5.4	→	5x5.4 6.3x5.4	6.3x5.4	6.3x5.8 8x6.2	6.3x7.7 8x10.2	→	10x10
68	→	5x5.4	→	6.3x5.4					
100	5x5.4	5x5.4	→	6.3x5.4	8x6.2	6.3x7.7	10x10.2 8x10.2	10x10.2	
150	6.3x5.4	→	6.3x5.8	6.3x7.7	→	8x10.2			
220	6.3x5.4	6.3x5.8	8x6.2	6.3x7.7 8x10.2	10x7.7 8x10.2	10x10.2 8x10.2	10x10.2		
330	→	6.3x7.7 8x6.2	→	→	10x10.2 8x10.2	10x10.2			
470	6.3x7.7	8x10.2	8x10.2	10x10.2 8x10.2					
1000	8x10.2	8x10.2	10x10.2						

Convert to inches, divide by 25.4

DxL (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	5.8 +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	6.2 +0.3 MAX	8.3	8.3	9.0	0.7~1.0	3.2
8	10.2 +0.5 MAX	8.3	8.3	9.0	0.7~1.0	3.2
10	10.2 +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, +85°C	Dimensions DxL (mm)
0.1	50	104SML050MD4	1989.437	3.2	4x5.4
0.22	50	224SML050MD4	904.289	4.7	4x5.4
0.33	50	334SML050MD4	602.860	5.7	4x5.4
0.47	50	474SML050MD4	423.284	6.8	4x5.4
1	50	105SML050MD4	198.944	10	4x5.4
2.2	50	225SML050MD4	90.429	15	4x5.4
3.3	50	335SML050M	60.286	18	4x5.4
3.3	100	335SML100M	50.238	28	6.3x5.8
4.7	35	475SML035M	42.328	20	4x5.4
4.7	50	475SML050M	42.328	23	4x5.4
4.7	50	475SML050MD5	42.328	25	5x5.4
4.7	100	475SML100MD8	35.274	60	8x10.2
10	16	106SML016M	26.526	25	4x5.4
10	35	106SML035M	19.894	30	5x5.4
10	35	106SML035MD4	23.210	27	4x5.4
10	50	106SML050MD5	19.894	41	5x5.4
10	50	106SML050M	19.894	42.6	6.3x5.4
10	100	106SML100MD8	16.579	85	8x10.2
22	6.3	226SML6R3M	19.593	31	4x5.4
22	16	226SML016M	12.057	39	5x5.4
22	16	226SML016MD4	15.071	30	4x5.4
22	25	226SML025MD5	10.550	41	5x5.4
22	35	226SML035M	9.043	54	6.3x5.4
22	50	226SML050M	9.043	45	6.3x5.4
22	63	226SML063MD8	9.043	120	8x10.2
22	100	226SML100M	7.536	120	8x10.2
33	4	336SML004M	17.583	26	4x5.4
33	10	336SML010M	10.048	43	5x5.4
33	10	336SML010MD4	12.057	34	4x5.4
33	25	336SML025MD5	7.033	50	5x5.4
33	25	336SML025M	8.038	63	6.3x5.4
33	35	336SML035M	6.029	60	6.3x5.8
33	50	336SML050MD8	6.029	95	8x6.2
33	50	336SML050M	6.029	85	6.3x7.7
33	63	336SML063M	6.029	160	8x10.2
33	100	336SML100M	5.024	190	10x10.2
47	4	476SML004M	12.346	34	4x5.4
47	6.3	476SML6R3MD4	9.877	36	4x5.4
47	6.3	476SML6R3M	9.171	47	5x5.4
47	16	476SML016MD5	7.055	52	5x5.4
47	16	476SML016M	7.055	68	6.3x5.4
47	25	476SML025M	4.938	70	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, +85°C	Dimensions DxL (mm)
47	35	476SML035M	4.233	70	6.3x5.8
47	35	476SML035MD8	4.938	105	8x6.2
47	50	476SML050M	4.233	90	6.3x7.7
47	50	476SML050MD8	4.233	140	8x10.2
47	100	476SML100M	3.527	155	10x10.2
68	6.3	686SML6R3M	6.826	50	5x5.4
68	16	686SML016M	4.876	78	6.3x5.4
100	4	107SML004M	5.803	61	5x5.4
100	6.3	107SML6R3M	4.642	60	5x5.4
100	16	107SML016M	2.653	86	6.3x5.4
100	25	107SML025M	2.653	145	8x6.2
100	35	107SML035M	1.989	120	6.3x7.7
100	50	107SML050M	1.989	200	8x10.2
100	50	107SML050MD10	1.989	195	10x10.2
100	63	107SML063M	1.989	280	10x10.2
150	4	157SML004M	3.868	84	6.3x5.4
150	10	157SML010M	2.653	88	6.3x5.8
150	16	157SML016M	2.210	135	6.3x7.7
150	35	157SML035MD8	1.547	220	8x10.2
220	4	227SML004M	2.638	82	6.3x5.4
220	6.3	227SML6R3M	1.959	95	6.3x5.8
220	10	227SML010M	1.809	175	8x6.2
220	16	227SML016MD8	1.507	215	8x10.2
220	16	227SML016M	1.507	150	6.3x7.7
220	25	227SML025MD8	1.055	270	8x10.2
220	25	227SML025M	1.206	250	10x7.7
220	35	227SML035M	1.055	270	8x10.2
220	35	227SML035MD10	1.055	265	10x10.2
220	50	227SML050M	0.904	320	10x10.2
330	6.3	337SML6R3MD8	1.407	190	8x6.2
330	6.3	337SML6R3M	1.407	150	6.3x7.7
330	25	337SML025M	0.804	310	8x10.2
330	25	337SML025MD10	0.804	305	10x10.2
330	35	337SML035M	0.703	340	10x10.2
470	4	477SML004M	1.235	150	6.3x7.7
470	6.3	477SML6R3M	0.988	265	8x10.2
470	10	477SML010MD8	0.847	290	8x10.2
470	16	477SML016M	0.705	330	8x10.2
470	16	477SML016MD10	0.705	330	10x10.2
1000	4	108SML004MD8	0.580	300	8x10.2
1000	6.3	108SML6R3M	0.464	330	8x10.2
1000	10	108SML010M	0.398	450	10x10.2