

HSM

+125°C Standard Radial Lead Aluminum Electrolytic Capacitors



For automotive and telecommunication applications

FEATURES

125°C Temperature rating
Extended Life

Voltage range: 10 WVDC to 63WVDC
Capacitance Range: 1.0μF to 4,700μF

SPECIFICATIONS

Capacitance Tolerance		±20% at 120Hz, 20°C								
Operating Temperature Range		-40°C to +125°C								
Dissipation Factor 120Hz, 20°C	WVDC	10	16	25	35	50	63			
	tan δ	.2	.16	.14	.12	.1	.1			
Note: For above D.F. specifications, add .02 for every 1,000 μf above 1,000 μf										
Impedance Ratio (Max.) @120Hz	WVDC	10	16	25	35	50	63			
	-25/20°C	3	2	2	2	2	2			
	-40/20°C	4	4	4	4	4	4			
Leakage Current	WVDC	≤ 63WVDC								
	Time	1 minute		2 minutes						
		.03 CV or 4 μA		.01 CV or 3 μA						
		Whichever is greater								
Load Life		1,000 hours at 125°C with rated WVDC								
		Capacitance change Dissipation factor Leakage current			< 20% of initial measured value <200% of initial specified value <100%Initial specified value					
Shelf Life		1,000 hours at 105°C with no voltage applied. Units will meet load life specification.								
Ripple Current Multipliers			Frequency(Hz)				Temperature(°C)			
		Capacitance (μF)	50	120	300	1K	10K	+105	+85	+70
		C≤47	.75	1.0	1.35	1.57	2	1.00	1.4	1.65
		47<C≤470	.8	1.0	1.23	1.34	1.5	1.00	1.4	1.65
		C>470	.85	1.0	1.1	1.13	1.15	1.00	1.4	1.65

SPECIAL ORDER OPTIONS

(See pages 33 thru 37)

- Special tolerances: ±10% (K), -10% + 30% (Q)
- Tape and Reel/Ammo Pack
- Cut, Formed, Cut and Formed, and Snap In Leads

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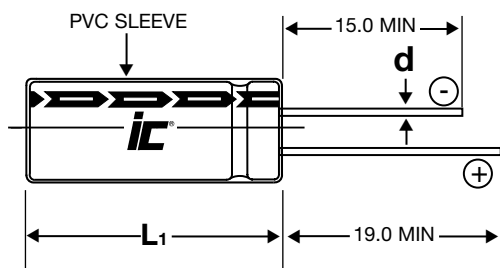
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PHYSICAL DIMENSIONS

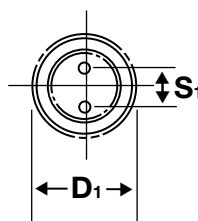
WVDC (SV) (μF)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)
1				→	8x11.5	
2.2				→	8x11.5	
3.3				→	8x11.5	
4.7				→	8x11.5	
10				→	8x11.5	
22				→	8x11.5	
33				→	8x11.5	
47				→	8x11.5	10x12.5
100		→	8x11.5	→	10x12.5	10x16
220	8x11.5	→	10x12.5	10x16	10x20	12.5x20
330	→	10x12.5	10x16	10x20	12.5x20	12.5x25
470	10x12.5	10x16	10x20	12.5x20	12.5x25	16x25
1000	10x20	12.5x20	12.5x25	16x25	16x31.5	
2200	12.5x25	16x25	16x31.5			
3300	16x25	16x31.5				
4700	16x31.5					

Convert to inches, divide by 25.4.

DxL(mm)



NOTE: Case Vent is standard on all diameter ≥8.0mm



LEAD INFORMATION V.S. CASE DIAMETER

D	8.0	10.0	12.5	16
S	3.5	5.0	5.0	7.5
d	0.6	0.6	0.6	0.8
B	0.5	0.5	0.8	0.5

L₁=L+2.0mm Max.
D₁=D+B Max.
S₁=S±0.5mm

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STANDARD PART LISTING

Capacitance (μF)	WVDC	ic [®] PART NUMBER	Maximum ESR Ω 120Hz, +20°C	Maximum RMS Ripple Current (mA) 120Hz, +125°C	Dimension DxL (mm)
1	50	105HSM050M	165.786	10	8x11.5
2.2	50	225HSM050M	75.357	22	8x11.5
3.3	50	335HSM050M	50.238	27	8x11.5
4.7	50	475HSM050M	35.274	32	8x11.5
10	50	106HSM050M	16.579	47	8x11.5
22	50	226HSM050M	7.536	70	8x11.5
33	50	336HSM050M	5.024	85	8x11.5
47	50	476HSM050M	3.527	105	8x11.5
47	63	476HSM063M	3.527	120	10x12.5
100	25	107HSM025M	2.321	125	8x11.5
100	50	107HSM050M	1.658	180	10x12.5
100	63	107HSM063M	1.658	200	10x16
220	10	227HSM010M	1.507	155	8x11.5
220	25	227HSM025M	1.055	220	10x12.5
220	35	227HSM035M	0.904	260	10x16
220	50	227HSM050M	0.754	320	10x20
220	63	227HSM063M	0.754	360	12.5x20
330	16	337HSM016M	0.804	250	10x12.5
330	25	337HSM025M	0.703	300	10x16
330	35	337HSM035M	0.603	350	10x20

Capacitance (μF)	WVDC	ic [®] PART NUMBER	Maximum ESR Ω 120Hz, +20°C	Maximum RMS Ripple Current (mA) 120Hz, +125°C	Dimension DxL (mm)
330	50	337HSM050M	0.502	430	12.5x20
330	63	337HSM063M	0.502	480	12.5x25
470	10	477HSM010M	0.705	270	10x12.5
470	16	477HSM016M	0.564	330	10x16
470	25	477HSM025M	0.494	390	10x20
470	35	477HSM035M	0.423	470	12.5x20
470	50	477HSM050M	0.353	570	12.5x25
470	63	477HSM063M	0.353	650	16x25
1000	10	108HSM010M	0.332	470	10x20
1000	16	108HSM016M	0.265	590	12.5x20
1000	25	108HSM025M	0.232	700	12.5x25
1000	35	108HSM035M	0.199	850	16x25
1000	50	108HSM050M	0.166	1030	16x31.5
2200	10	228HSM010M	0.181	820	12.5x25
2200	16	228HSM016M	0.151	1030	16x25
2200	25	228HSM025M	0.136	1210	16x31.5
3300	10	338HSM010M	0.131	1090	16x25
3300	16	338HSM016M	0.111	1330	16x31.5
4700	10	478HSM010M	0.099	1390	16x31.5

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