

SAK

+ 85°C Low Profile Radial Lead Aluminum Electrolytic Capacitors



For all general purpose applications

FEATURES

- Low Profile
- Capacitance range: 22 μ F to 10,000 μ F
- Voltage range: 6.3 WVDC to 50 WVDC
- Solvent tolerant end seals standard

SPECIFICATIONS

Capacitance Tolerance		$\pm 20\%$ at 120Hz, 20°C									
Operating Temperature Range		-40°C to +85°C									
Dissipation Factor 120Hz, 20°C	WVDC	6.3	10	16	25	35	50				
	tan δ	.28	.24	.20	.16	.14	.12				
Note: For above D.F. specifications, add .02 for every 1,000 μ F above 1,000 μ F											
Impedance Ratio (Max.) @120Hz	WVDC	6.3	10	16	25	35	50				
	-25/20°C	5	4	3	2	2	2				
	-40/20°C	12	10	8	5	4	3				
Leakage Current	WVDC	50WVDC									
	Time	1 minute			2 minutes						
		.03 CV or 4 μ A			.01 CV or 3 μ A				whichever is greater		
Load Life		2,000 hours at 85°C with rated WVDC									
		Capacitance change Dissipation factor Leakage current				<20% of initial measured value <200% of initial specified value <Initial specified value					
Shelf Life		1,000 hours at 85°C with no voltage applied. Units will meet load life specifications.									
Ripple Multipliers		Frequency(Hz)					Temperature(°C)				
		Capacitance (μ F)	60	120	300	1K	10K	+85°C	+70°C	+60°C	+30°C
		47	0.75	1.0	1.35	1.57	2.0	1.0	1.3	1.5	1.8
		100-470	0.8	1.0	1.23	1.32	1.5	1.0	1.3	1.5	1.8
		1,000+	0.85	1.0	1.1	1.13	1.15	1.0	1.3	1.5	1.8

SPECIAL ORDER OPTIONS

(See pages 7 thru 11)

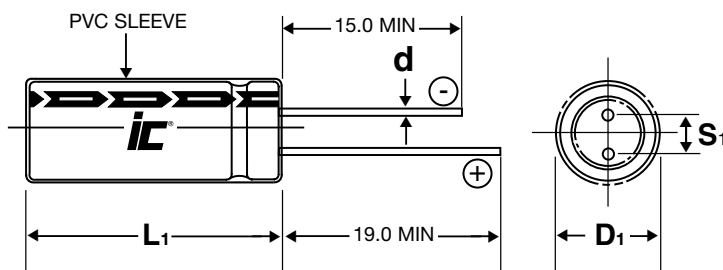
- Special tolerances: $\pm 10\%$ (K), -10% + 30% (Q)
- Tape and Reel/Ammo Pack
- Cut, formed, cut and formed, and snap-in leads
- Epoxy end seal
- Polyester sleeve

PHYSICAL DIMENSIONS

WVDC (SV) (μF)	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
22					→	5x9
33				→	5x9	6.3x9
47			→	5x9	→	6.3x9
100	→	5x9	→	6.3x9	8x9	10x9
220	→	6.3x9	8x9	→	10x9	10x12.5
330	6.3x9	8x9	→	10x9	10x12.5	12.5x12.5
470	→	8x9	10x9	10x12.5	12.5x12.5	16x15
1,000	10x9	10x12.5	12.5x12.5	12.5x15	16x15	18x20
2,200	→	12.5x15	16x15	18x15	18x20	18x25
3,300	→	16x15	18x15	18x20		
4,700	16x15	18x15	18x20	18x25		
6,800	18x15	18x20	18x25			
10,000	18x20	18x25				

Convert to inches, divide by 25.4

DxL(mm)



Note: Case Vent is standard on all diameters 8.0 mm.

LEAD INFORMATION V.S. CASE DIAMETER (mm)

D	5.0	6.3	8.0	10.0	12.5	16.0	18.0
S	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
B	0.5	0.5	0.5	0.5	0.8	0.5	0.5

L₁=L+1.0mm Max. D 8mm
 L₁=L+1.5mm Max. D 10mm
 D₁=D+B Max.
 S₁=S±0.5 Max.

STANDARD PART LISTING

Capacitance (µF)	WVDC	iC PART NUMBER	Maximum ESR	Maximum RMS Ripple Current (mA)	Dimensions DxL (mm)
			120Hz, +20°C	120Hz, +85°C	
22	50	226SAK050M	9.04	90	5x9
33	35	336SAK035M	7.03	100	5x9
33	50	336SAK050M	6.03	120	6.3x9
47	25	476SAK025M	5.64	110	5x9
47	50	476SAK050M	4.23	140	6.3x9
100	10	107SAK010M	3.98	135	5x9
100	25	107SAK025M	2.65	180	6.3x9
100	35	107SAK035M	2.32	210	8x9
100	50	107SAK050M	1.99	240	10x9
220	10	227SAK010M	1.81	220	6.3x9
220	16	227SAK016M	1.51	270	8x9
220	35	227SAK035M	1.06	330	10x9
220	50	227SAK050M	0.90	410	10x12.5
330	6.3	337SAK6R3M	1.41	250	6.3x9
330	10	337SAK010M	1.21	300	5x9
330	25	337SAK025M	0.80	370	10x9
330	35	337SAK035M	0.70	460	10x12.5
330	50	337SAK050M	0.60	520	12.5x12.5
470	10	477SAK010M	0.85	360	8x9
470	16	477SAK016M	0.71	400	10x9
470	25	477SAK025M	0.56	520	10x12.5
470	35	477SAK035M	0.49	570	12.5x12.5
470	50	477SAK050M	0.42	730	16x15

NOTE 1: WVDC: MAXIMUM RATED DC WORKING VOLTAGE AT +85°C.

NOTE 2: SVDC: MAXIMUM RATED DC SURGE VOLTAGE AT +85°C.

NOTE 3: DISSIPATION FACTOR (TAN δ) MAXIMUM; 120Hz, +25°C.

NOTE 4: ESR: MAXIMUM EQUIVALENT SERIES RESISTANCE; 120Hz, +25°C
MINIMUM CAPACITANCE, MAXIMUM DISSIPATION FACTOR.

Capacitance (µF)	WVDC	iC PART NUMBER	Maximum ESR	Maximum RMS Ripple Current (mA)	Dimensions DxL (mm)
			120Hz, +20°C	120Hz, +85°C	
1,000	6.3	108SAK6R3M	0.46	490	10x9
1,000	10	108SAK010M	0.40	620	10x12.5
1,000	16	108SAK016M	0.33	700	12.5x12.5
1,000	25	108SAK025M	0.27	820	12.5x15
1,000	35	108SAK035M	0.23	990	16x15
1,000	50	108SAK050M	0.20	1,180	18x20
2,200	10	228SAK010M	0.21	950	12.5x15
2,200	16	228SAK016M	0.18	1,170	16x15
2,200	25	228SAK025M	0.15	1,350	18x15
2,200	35	228SAK035M	0.14	1,520	18x20
2,200	50	228SAK050M	0.12	1,750	18x25
3,300	10	338SAK010M	0.15	1,270	16x15
3,300	16	338SAK016M	0.13	1,430	18x15
3,300	25	338SAK025M	0.11	1,660	18x20
4,700	6.3	478SAK6R3M	0.13	1,380	16x15
4,700	10	478SAK010M	0.11	1,530	18x15
4,700	16	478SAK016M	0.10	1,740	18x20
4,700	25	478SAK025M	0.08	2,060	18x25
6,800	6.3	688SAK6R3M	0.10	1,640	18x15
6,800	10	688SAK010M	0.09	1,830	18x20
6,800	16	688SAK016M	0.08	2,120	18x25
10,000	6.3	109SAK6R3M	0.08	1,950	18x20
10,000	10	109SAK010M	0.07	2,230	18x25

NOTE 5: MAXIMUM LEAKAGE CURRENT; RATED WVDC, 1MINUTE, +25°C.

NOTE 6: RMS RIPPLE CURRENT; 120Hz, +85°C

NOTE 7: CAPACITANCE TOLERANCE IS MEASURED AT 120Hz, +25°C.

NOTE 8: ALL MEASUREMENTS ARE PERFORMED USING THE BRIDGE METHOD.

