Type SK 85 °C Radial Leaded Aluminum Electrolytic Capacitors

2000 Hour Long Life, General Purpose Aluminum Electrolytic



Specifications

Type SK is a radial leaded aluminum electrolytic capacitor with a +85 °C, 2000 hour long life rating. The SK is a high CV rated product and is ideal for general purpose applications such as stereo radio, TV, computers and other consumer electronic products.

Highlights

- +85 °C
- 2000 hours long life
- High CV
- Available in T&R and ammo pack

Capacitance Range:

0.47 to 15,000 μF

Voltage Range:

6.3 to 450 Vdc

Capacitance Tolerance:

±20%

Operating Temperature Range:

-40 °C to +85 °C; 6.3 to 100 Vdc -25 °C to +85 °C; 160 to 450 Vdc

DC Leakage Current:

6.3 to 100 Vdc; $I = \le .01CV$ or 3 μA Max

Whichever is greater after 2 minutes application

of DC working voltage at 20 °C ≥100 Vdc; I = ≤.03CV or 10 µA Max

Whichever is greater after 2 minutes application

of DC working voltage at 20 °C

C = Capacitance in (μF)

V = Rated voltage
I = Leakage current in µA

Dissipation Factor @ 120 Hz, +20 °C:

										•	
WV (V)	6.3	10	16	25	35	50	63	100	160-250	350-450
DF(%	6)	24	20	16	14	12	10	10	10	20	24

Ripple Multipliers for Voltage and Temperature:

For capacitance values > 1000 μ F, the DF (%) value is increased 2% for every additional 1000 μ F

Rated	Ripple Multipliers						
WVDC	60Hz	120Hz	1kHz				
6 to 25	0.85	1.0	1.1				
35 to 100	0.75	1.0	1.3				
160 to 250	0.70	1.0	1.4				

100 to 250	0.70
Ambient	Ripple
Temperatur	e Multiplier
+85 °C	1.00
+75 °C	1.14

+65 °C

RoHS Compliant

Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Load Life:

Apply WVDC for 2000 hours at +85 °C

1.25

Capacitance change within 20% of initial limit DF not to exceed 200% of initial requirement

Leakage current meets initial limits

Shelf Life: 1000 hrs at +85 °C with no voltage applied

Cap change within 20% of initial values

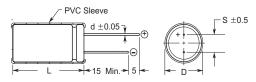
DF ≤ 200% of initial requirements

DC leakage current meets initial measured value

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Outline Drawing

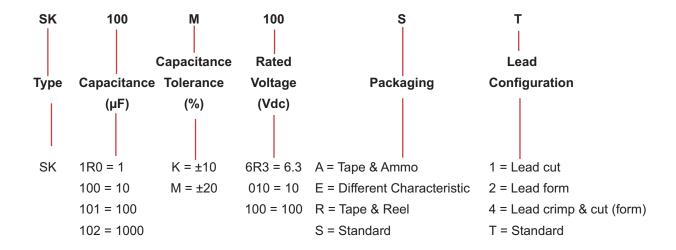
Outline Dimensions (Millimeters)



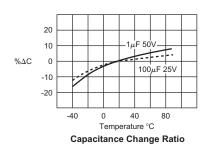
Case vented on diameters 6.3 and greater

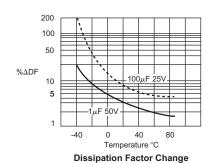
Vinyl sleeve adds .5 Max. to diameter and 2.0 Max. to length

Part Numbering System

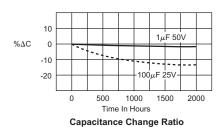


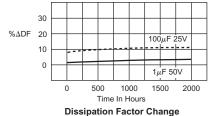
Temperature Characteristics

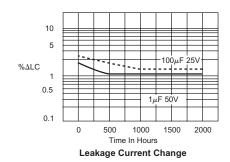




Load Life Characteristics







Type SK 85 °C Radial Leaded Aluminum Electrolytic Capacitors

Ratings

	1	Max ESR	Max Ripple				
	Catalog	120 Hz	120 Hz		Size i	in. (mm)	
Сар	Part Number	+25 °C	+85 °C	Diameter	Length	Lead Space	Lead Dia.
(µF)		(Ω)	(mA)	(D)	(L)	(S)	(d)
(Pi)			.3 Vdc (8 Vol		(=)	(0)	(4)
100	SK101M6R3ST	2.92	130	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
220	SK221M6R3ST	1.33	240	.248 (6.3)			.0197 (0.5)
330	SK331M6R3ST	0.88	300	.248 (6.3)	, ,	` ′	.0197 (0.5)
470	SK471M6R3ST	0.62	380	1	.453 (11.5)		.0236 (0.6)
1000	SK102M6R3ST	0.29	580		.512 (13.0)	` ′	.0236 (0.6)
2200	SK222M6R3ST	0.14	1050		.827 (21.0)		.0236 (0.6)
3300	SK332M6R3ST	0.10	1250	` ′	.827 (21.0)	` ′	.0236 (0.6)
4700	SK472M6R3ST	0.08	1700		.984 (26.0)		.0236 (0.6)
6800	SK682M6R3ST	0.07	1900	` ′	.984 (25.0)	` ′	.0315 (0.8)
10000	SK103M6R3ST	0.05	2250		1.26 (32.0)		.0315 (0.8)
15000	SK153M6R3ST	0.04	2680	`	1.38 (35.0)	` ′	.0315 (0.8)
10000	OK 100 WOTOOT		0 Vdc (13 Vo	!	1.00 (00.0)	.230 (7.0)	1.0010 (0.0)
33	SK330M010ST	7.64	80	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
47	SK470M010ST	5.36	95	.197 (5.0)	` ′		.0197 (0.5)
100	SK101M010ST	2.52	180	.197 (5.0)			.0197 (0.5)
220	SK221M010ST	1.15	250	.248 (6.3)	` ′		.0197 (0.5)
330	SK331M010ST	0.76	330	` ′	.433 (11.0)		.0236 (0.6)
470	SK471M010ST	0.74	400	.315 (8.0)			.0236 (0.6)
1000	SK102M010ST	0.25	630		.630 (16.0)		.0236 (0.6)
2200	SK222M010ST	0.14	1100		.827 (21.0)		.0236 (0.6)
3300	SK332M010ST	0.10	1400	` ′	.827 (21.0)	` ′	.0236 (0.6)
4700	SK472M010ST	0.08	1800		.984 (25.0)		.0315 (0.8)
6800	SK682M010ST	0.07	2150		1.26 (32.0)		.0315 (0.8)
10000	SK103M010ST	0.05	2500		1.38 (35.0)		.0315 (0.8)
15000	SK153M010ST	0.04	2950	` ′	1.65 (42.0)	` ′	.0315 (0.8)
	- Citrodino roci		6 Vdc (20 Vo		11.00 (12.0)	1 .200 (7.0)	1.00.10 (0.0)
22	SK220M016ST	9.65	75	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
33	SK330M016ST	6.43	110		.433 (11.0)		.0197 (0.5)
47	SK470M016ST	4.52	130	1	.433 (11.0)	i	.0197 (0.5)
100	SK101M016ST	2.12	185		.433 (11.0)		.0197 (0.5)
220	SK221M016ST	0.97	320		.453 (11.5)		.0236 (0.6)
330	SK331M016ST	0.64	360		.453 (11.5)		.0236 (0.6)
470	SK471M016ST	0.45	470		.512 (13.0)		.0236 (0.6)
1000	SK102M016ST	0.21	790		.827 (21.0)		.0236 (0.6)
2200	SK222M016ST	0.14	1350		.827 (21.0)		.0236 (0.6)
3300	SK332M016ST	0.10	1700	` ′	.984 (26.0)	1 ' '	.0236 (0.6)
4700	SK472M016ST	0.08	2100		1.26 (32.0)		.0315 (0.8)
6800	SK682M016ST	0.07	2500		1.38 (35.0)		.0315 (0.8)
10000	SK103M016ST	0.05	2700	` ′	1.65 (42.0)	1 ' '	.0315 (0.8)
	1 3.1.1.2			Its Surge)	1 (-= -0)	1 ()	1 22 13 (3.0)
		2	J VUCIJE VU	3-/			
	SK100M025ST	1		.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
10	SK100M025ST SK220M025ST	18.57	50	.197 (5.0) .197 (5.0)	1		.0197 (0.5)
10 22	SK220M025ST	18.57 8.44	50 90	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
10		18.57	50	l	.433 (11.0) .433 (11.0)	.079 (2.0) .079 (2.0)	

Type SK 85 °C Radial Leaded Aluminum Electrolytic Capacitors

		Max ESR Max Ripple						
	Catalog	120 Hz	120 Hz		Size i	n. (mm)		
Сар	Part Number	+25 °C	+85 °C	Diameter	Length	Lead Space	Lead Dia.	
(µF)		(Ω)	(mA)	(D)	(L)	(S)	(d)	
		2	5 Vdc (32 Vo	Its Surge)				
220	SK221M025ST	0.84	320		.453 (11.5)		.0236 (0.6)	
330	SK331M025ST	0.56	420	.394 (10.0)	.512 (13.0)	.197 (5.0)	.0236 (0.6)	
470	SK471M025ST	0.39	540		.630 (16.0)		.0236 (0.6)	
1,000	SK102M025ST	0.18	950	.512 (13.0)	.827 (21.0)	.197 (5.0)	.0236 (0.6)	
2,200	SK222M025ST	0.14	1550	.512 (13.0)	.984 (26.0)	.197 (5.0)	.0236 (0.6)	
3,300	SK332M025ST	0.10	1950	.630 (16.0)	1.26 (32.0)	.295 (7.5)	.0315 (0.8)	
4,700	SK472M025ST	0.08	2360		1.38 (35.0)	.295 (7.5)	.0315 (0.8)	
6,800	SK682M025ST	0.06	2550		1.65 (42.0)	.295 (7.5)	.0315 (0.8)	
			5 Vdc (44 Vo					
10	SK100M035ST	15.92	60	` ′	.433 (11.0)	` ′	.0197 (0.5)	
22	SK220M035ST	7.23	95	.197 (5.0)	-	` ′	.0197 (0.5)	
33	SK330M035ST	4.82	115	.197 (5.0)	.433 (11.0)		.0197 (0.5)	
47	SK470M035ST	3.38	140	.248 (6.3)	` ′	` ′	.0197 (0.5)	
100	SK101M035ST	1.59	230		.453 (11.5)		.0236 (0.6)	
220	SK221M035ST	0.72	370		.512 (13.0)		.0236 (0.6)	
330	SK331M035ST	0.48	490	` '	.630 (16.0)	` ′	.0236 (0.6)	
470	SK471M035ST	0.33	640		.827 (21.0)		.0236 (0.6)	
1,000	SK102M035ST	0.15	1100		.827 (21.0)		.0236 (0.6)	
2,200	SK222M035ST	0.14	1800		1.26 (32.0)	.295 (7.5)	.0315 (0.8)	
3,300	SK332M035ST	0.10	2220		1.38 (35.0)		.0315 (0.8)	
4,700	SK472M035ST	0.08	2400		1.65 (42.0)	.295 (7.5)	.0315 (0.8)	
ļ			0 Vdc (63 Vo		Γ	1		
0.47	SKR47M050ST	282.33	5	.197 (5.0)			.0197 (0.5)	
1.0	SK010M050ST	132.70	10	.197 (5.0)	.433 (11.0)		.0197 (0.5)	
2.2	SK2R2M050ST	60.32	23	.197 (5.0)	.433 (11.0)		.0197 (0.5)	
3.3	SK3R3M050ST	40.21	35	.197 (5.0)	.433 (11.0)		.0197 (0.5)	
4.7	SK4R7M050ST	28.23	40	.197 (5.0)		.079 (2.0)	.0197 (0.5)	
10	SK100M050ST	13.27	65	.197 (5.0)		.079 (2.0)	.0197 (0.5)	
22	SK220M050ST	6.03	100	.197 (5.0)			.0197 (0.5)	
33	SK330M050ST	4.02	125	.248 (6.3)	-		.0197 (0.5)	
47	SK470M050ST	2.82	150	.248 (6.3)			.0197 (0.5)	
100	SK101M050ST	1.33	250		.433 (11.0)	.138 (3.5)	.0236 (0.6)	
220	SK221M050ST	0.60	440		.630 (16.0)		.0236 (0.6)	
330	SK331M050ST	0.40	580		.827 (21.0)		.0236 (0.6)	
470	SK471M050ST	0.28	760	` '	.827 (21.0)		.0236 (0.6)	
1,000	SK102M050ST	0.13	1350		.984 (25.0)		.0236 (0.6)	
2,200	SK222M050ST	0.14	2090		1.38 (35.0)		.0236 (0.6)	
3,300	SK332M050ST	0.10	2320		1.65 (42.0)	.295 (7.5)	.0236 (0.6)	
	0140 4		3 Vdc (79 Vo	1		l a== :: -:		
0.5	SKR47M063ST	254.10	5	.197 (5.0)	.433 (11.0)		.0197 (0.5)	
1.0	SK010M063ST	119.43	10	.197 (5.0)	-		.0197 (0.5)	
2.2	SK2R2M063ST	54.28	29	.197 (5.0)	.433 (11.0)		.0197 (0.5)	
3.3	SK3R3M063ST	36.19	40	.197 (5.0)	.433 (11.0)		.0197 (0.5)	
4.7	SK4R7M063ST	25.41	45	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)	
10.0	SK100M063ST	11.94	70	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)	

^{*} Note max leakage current ≥100 Vdc is measured at 3 minutes

Type SK 85 °C Radial Leaded Aluminum Electrolytic Capacitors

		Max ESR	Max Ripple						
	Catalog	120 Hz	120 Hz 120 Hz		Size in. (mm)				
Сар	Part Number	+25 °C	+85 °C	Diameter	Length	Lead Space	Lead Dia.		
(µF)		(Ω)	(mA)	(D)	(L)	(S)	(d)		
63 Vdc (79 Volts Surge)									
22	SK220M063ST	5.43	115	.248 (6.3)	.433 (11.0)	.098 (2.5)	.0197 (0.5)		
33	SK330M063ST	3.62	140	.248 (6.3)	.433 (11.0)	.098 (2.5)	.0197 (0.5)		
47	SK470M063ST	2.54	190	.315 (8.0)	.433 (11.0)	.138 (3.5)	.0236 (0.6)		
100	SK101M063ST	1.19	300	.394 (10.0)	.512 (13.0)	.197 (5.0)	.0236 (0.6)		
220	SK221M063ST	0.54	490	.394 (10.0)	.827 (21.0)	.197 (5.0)	.0236 (0.6)		
330	SK331M063ST	0.36	680	.512 (13.0)	.827 (21.0)	.197 (5.0)	.0236 (0.6)		
470	SK471M063ST	0.25	880	.512 (13.0)	.984 (26.0)	.197 (5.0)	.0236 (0.6)		
1,000	SK102M063ST	0.12	1550		1.26 (32.0)	.295 (7.5)	.0315 (0.8)		
		1	00 Vdc (125 V						
0.47	SKR47M100ST	225.87	10		.433 (11.0)		.0197 (0.5)		
1	SK010M100ST	106.16	21	, ,	.433 (11.0)	` ′	.0197 (0.5)		
2.2	SK2R2M100ST	48.25	30		.433 (11.0)		.0197 (0.5)		
3.3	SK3R3M100ST	32.17	40	.197 (5.0)	` ′	.079 (2.0)	.0197 (0.5)		
4.7	SK4R7M100ST	22.59	50	` ,	.433 (11.0)	` ′	.0197 (0.5)		
10	SK100M100ST	10.62	75		.433 (11.0)	1	.0197 (0.5)		
22	SK220M100ST	4.83	130	, ,	.433 (11.0)	` ′	.0236 (0.6)		
33	SK330M100ST	3.22	170	-	.512 (13.0)	1	.0236 (0.6)		
47	SK470M100ST	2.26	230		.630 (16.0)	1	.0236 (0.6)		
100	SK101M100ST	1.06	400		.827 (21.0)		.0236 (0.6)		
220	SK221M100ST	0.48	710	-	.984 (25.0)	1	.0315 (0.8)		
330	SK331M100ST	0.32	860	-	.984 (25.0)		.0315 (0.8)		
470	SK471M100ST	0.23	1100		1.26 (32.0)	.295 (7.5)	.0315 (0.8)		
	[]		60 Vdc (200 V						
0.47	SKR47M160ST	423.50	12.0		.433 (11.0)	.098 (2.5)	.0197 (0.5)		
1.0	SK010M160ST	199.04	17.0		.433 (11.0)		.0197 (0.5)		
2.2	SK2R2M160ST	90.47	26.0	.248 (6.3)		1	.0197 (0.5)		
3.3	SK3R3M160ST	60.32	35.0	.248 (6.3)		.098 (2.5)	.0197 (0.5)		
4.7	SK4R7M160ST	42.35	40.0	.248 (6.3)		.098 (2.5)	.0197 (0.5)		
10	SK100M160ST	19.90	65.0		.433 (11.0)		.0197 (0.5)		
22	SK220M160ST	9.05	110.0		.630 (16.0)		.0236 (0.6)		
33	SK330M160ST	6.03	150.0		.827 (21.0)	l	.0236 (0.6)		
47	SK470M160ST	4.23	180.0	-	.827 (21.0)		.0236 (0.6)		
100	SK101M160ST	1.99	300.0	. ,	.984 (26.0)	` ′	.0236 (0.6)		
220	SK221M160ST	0.90	510.0		1.42 (36.0)	l ' '	.0315 (0.8)		
330	SK331M160ST	0.60	600.0 00 Vdc (250 V	,	1.65 (42.0)	.295 (7.5)	.0315 (0.8)		
0.5	SKR47M200ST	423.50	12		.433 (11.0)	009 (2.5)	.0197 (0.5)		
0.5				, ,	` '	` ′	1 1		
1.0 2.2	SK010M200ST SK2R2M200ST	199.04 90.47	17 26		.433 (11.0) .433 (11.0)	1	.0197 (0.5) .0197 (0.5)		
3.3	SK3R3M200ST	60.32	35		.433 (11.0)	1	.0197 (0.5)		
4.7	SK4R7M200ST	42.35	45		.433 (11.0)	.138 (3.5)	.0236 (0.6)		
10	SK100M200ST	19.90	70		.512 (13.0)		.0236 (0.6)		
22	SK220M200ST	9.05	110		.827 (21.0)	1	.0236 (0.6)		
33	SK330M200ST	6.03	160		.827 (21.0)	1	.0236 (0.6)		
47	SK470M200ST	4.23	180		.827 (21.0)	1	.0236 (0.6)		
4/	51147 01VIZ003 I	4.23	100	.512 (13.0)	1.021 (21.0)	197 (5.0)	.0230 (0.0)		

^{*} Note max leakage current ≥100 Vdc is measured at 3 minutes

Type SK 85 °C Radial Leaded Aluminum Electrolytic Capacitors

	1								
	Max ESR Max Ripple			i i					
	Catalog	120 Hz 120 Hz		Size in. (mm)					
Сар	Part Number	+25 °C	+85 °C	Diameter	Length	Lead Space	Lead Dia.		
(µF)		(Ω)	(mA)	(D)	(L)	(S)	(d)		
200 Vdc (250 Volts Surge)									
100	SK101M200ST	1.99	330		.984 (25.0)	.295 (7.5)	.0315 (0.8)		
220	SK221M200ST	0.90	520		1.65 (42.0)		.0315 (0.8)		
250 Vdc (300 Volts Surge)									
0.47	SKR47M250ST	423.50	12		.433 (11.0)	.098 (2.5)	.0197 (0.5)		
1.0	SK010M250ST	199.04	17		.433 (11.0)	` ′	.0197 (0.5)		
2.2	SK2R2M250ST	90.47	30		.433 (11.0)		.0197 (0.5)		
3.3	SK3R3M250ST	60.32	35		.433 (11.0)		.0236 (0.6)		
4.7	SK4R7M250ST	42.35	45		.433 (11.0)		.0236 (0.6)		
10	SK100M250ST	19.90	70	` ′	.630 (16.0)	` ′	.0236 (0.6)		
22	SK220M250ST	9.05	130		.827 (21.0)		.0236 (0.6)		
33	SK330M250ST	6.03	160		.827 (21.0)		.0236 (0.6)		
47	SK470M250ST	4.23	210		.984 (26.0)		.0236 (0.6)		
100	SK101M250ST	1.99	310		1.26 (32.0)		.0315 (0.8)		
			50 Vdc (400 V		`	, ,			
0.47	SKR47M350ST	564.67	14		.433 (11.0)	.138 (3.5)	.0236 (0.6)		
1.0	SK010M350ST	265.39	18	.315 (8.0)			.0236 (0.6)		
2.2	SK2R2M350ST	120.63	28	` ′	.433 (11.0)		.0236 (0.6)		
3.3	SK3R3M350ST	80.42	35	` ′	.512 (13.0)	` ′	.0236 (0.6)		
4.7	SK4R7M350ST	56.47	40		.512 (13.0)	` ′	.0236 (0.6)		
10	SK100M350ST	26.54	70		.827 (21.0)		.0236 (0.6)		
22	SK220M350ST	12.06	110		.827 (21.0)		.0236 (0.6)		
33	SK330M350ST	8.04	140		.984 (26.0)		.0236 (0.6)		
47	SK470M350ST	5.65	220		.984 (25.0)		.0315 (0.8)		
100	SK101M350ST	2.65	360		1.42 (36.0)		.0315 (0.8)		
			00 Vdc (450 V		`	, ,			
0.5	SKR47M400ST	564.67	14		.433 (11.0)	.138 (3.5)	.0236 (0.6)		
1.0	SK010M400ST	265.39	18	.315 (8.0)	` '	` ′	.0236 (0.6)		
2.2	SK2R2M400ST	120.63	28		.433 (11.0)		.0236 (0.6)		
3.3	SK3R3M400ST	80.42	32	' '	.512 (13.0)	` ′	.0236 (0.6)		
4.7	SK4R7M400ST	56.47	41		.630 (16.0)		.0236 (0.6)		
10	SK100M400ST	26.54	70		.827 (21.0)		.0236 (0.6)		
22	SK220M400ST	12.06	120	1	.984 (26.0)		.0236 (0.6)		
33	SK330M400ST	8.04	140		.984 (25.0)		.0315 (0.8)		
47	SK470M400ST	5.65	160		1.26 (32.0)		.0315 (0.8)		
			50 Vdc (500 V			` '	/		
0.47	SKR47M450ST	564.67	14		.433 (11.0)	.138 (3.5)	.0236 (0.6)		
1.0	SK010M450ST	265.39	19		.453 (11.5)		.0236 (0.6)		
2.2	SK2R2M450ST	120.63	29		.512 (13.0)		.0236 (0.6)		
3.3	SK3R3M450ST	80.42	35		.630 (16.0)		.0236 (0.6)		
4.7	SK4R7M450ST	56.47	50		.709 (18.0)		.0236 (0.6)		
10	SK100M450ST	26.54	75		.827 (21.0)		.0236 (0.6)		
22	SK220M450ST	12.06	110		.984 (25.0)		.0315 (0.8)		
33	SK330M450ST	8.04	150	1	1.42 (36.0)		.0315 (0.8)		
47	SK470M450ST	5.65	230	1	1.57 (40.0)		.0315 (0.8)		
	1 2.1 0 10001	1 2.00		1.300 (10.0)	1		1.30.0 (0.0)		