

KR1 Miniature Aluminum Electrolytic Capacitors

85°C Miniature Standard Capacitors, Series KR1.

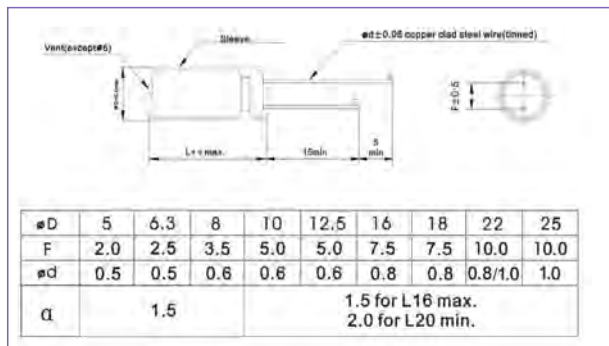
Guaranteed 2000 hours at 85°C

Outline Drawing

Unit: mm

Photo

ROSH



Marking color: black print on yellow sleeve

Standard Type

Specifications

No.	Item	Performance											
1	Temperature range (°C)	-40 to +85 (6.3V ~ 100V)						-25 to +85 (160V ~ 500V)					
2	Leakage current (μA)	Less than 0.01CV or 3 whichever is larger (after two minutes)						Less than 0.02CV or 3 whichever is larger (after two minutes)					
		C: Rated Capacitance (μF). V: Rated voltage (V) 20°C											
3	Capacitance tolerance (%)	±20 (20°C, 120Hz)											
4	Tangent of the loss angle (Tan δ)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160-250	350-500	20°C
		Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	120Hz
		0.02 is added to each 1000uF increase over 1000uF.											
5	Low temperature characteristics	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160-250	350-500	120Hz
		Impedance ratio (max)	$Z_{(-25°C)} / Z_{(+20°C)}$	4	3	2	2	2	2	2	2	4	
		$Z_{(-40°C)} / Z_{(+20°C)}$	8	6	4	4	3	3	3	3	15	10	
6	Endurance (85°C) (Applied ripple current)	Test time	2000hours										
		Leakage current	The initial specified value or less										
		Percentage of capacitance change	Within ±20% of initial value										
		Tangent of the loss angle	200% or less of the initial specified value										
7	Shelf life (85°C)	Test time	1000hours										
		Leakage current	The initial specified value or less										
		Percentage of capacitance change	Within ±20% of initial value										
		Tangent of the loss angle	200% or less of the initial specified value										
8	Applicable standards	JIS-C-5102 and JIS-C-5141											

Coefficient of Frequency for Ripple Current

Rated voltage (V)	Frequency (Hz) CV(μF×V)	50+60	120	1K	10K	100K
		6.3 to 16	All CV value	0.80	1.00	1.10
25 to 35	≤ 1000	0.80	1.00	1.50	1.70	1.70
	> 1000	0.80	1.00	1.20	1.30	1.30
50 to 100	≤ 1000	0.80	1.00	1.60	1.90	1.90
	> 1000	0.80	1.00	1.20	1.30	1.30
160 to 500	All CV value	0.80	1.00	1.30	1.50	1.60

Coefficient of Temperature for Ripple Current

Temperature (°C)	70 or less	85
Coefficient	1.35	1.00

KR1 Miniature Aluminum Electrolytic Capacitors

Dimension: Φ DXL(mm)

Ripple Current: mA/rms at 120Hz, 85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	6.3V				10V				16V				25V			
	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA
4.7													5X11	31		
10									5X11	49			5X11	54		
22					5X11	70			5X11	75			5X11	80		
33	5X11	72			5X11	84			5X11	90			5X11	97		
47	5X11	90			5X11	100			5X11	110			5X11	115		
100	5X11	130			5X11	145			6.3X11	180	5X11	160	6.3X11	190		
220	6.3X11	230	5X11	200	6.3X11	250	5X11	220	8X11.5	300	6.3X11	260	8X11.5	320		
330	8X11.5	290	6.3X11	270	8X11.5	350	6.3X11	290	8X11.5	370			10X12.5	470	8X11.5	440
470	8X11.5	380	6.3X11	320	8X11.5	415	6.3X11	350	10X12.5	520	8X11.5	440	10X16	620	10X12.5	545
1000	8X11.5	540			10X12.5	650			10X16	785			12.5X25	1090	12.5X20	955
2200	10X20	1000			12.5X20	1240	10X20	1070	12.5X20	1295			16X25	1660	12.5X25	1540
3300	12.5X20	1380	10X20	1185	12.5X20	1420			16X25	1840	12.5X25	1655	16X31.5	2070	16X25	1975
4700	16X25	1880	12.5X20	1545	16X25	1980	12.5X25	1780	16X31.5	2260	16X25	2090	18X35.5	2520	16X31.5	2420
6800	16X25	2120	12.5X25	1880	16X25	2220			16X31.5	2520			18X35.5	2880		
10000	16X31.5	2500	16X25	2330	18X35.5	2880	16X35.5	2670	18X40	3080	18X35.5	2920	22X40	3440	18X40	3080
22000	22X40	3700	18X40	3320	22X40	3790	18X40	3370	22X40	3900						

V.DC Contents μ F	35V				50V				63V				100V			
	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA
0.1					5X11	1.5			5X11	3			5X11	3		
0.22					5X11	3.5			5X11	4.5			5X11	5.8		
0.33					5X11	5			5X11	7.5			5X11	8.8		
0.47					5X11	7			5X11	9.5			5X11	12		
1					5X11	15			5X11	17			5X11	22		
2.2					5X11	29			5X11	28			5X11	33		
3.3					5X11	35			5X11	34			5X11	40		
4.7	5X11	40			5X11	42			5X11	45			5X11	48		
10	5X11	58			5X11	65			5X11	70			6.3X11	80		
22	5X11	87			5X11	95			6.3X11	115			8X11.5	135	6.3X11	115
33	6.3X11	115	5X11	108	6.3X11	136			8X11.5	150	6.3X11	140	10X16	195	8X11.5	145
47	6.3X11	145	5X11	130	6.3X11	165			8X11.5	190	6.3X11	170	10X16	255	10X12.5	235
100	8X11.5	240	6.3X11	210	8X11.5	260			10X12.5	320			10X20	370		
220	10X12.5	420	8X11.5	385	10X16	490			10X20	565	10X16	490	12.5X25	675	12.5X20	640
330	10X16	570	10X12.5	490	12.5X20	635			12.5X20	765	10X20	710	16X31.5	972	16X25	825
470	10X16	740			12.5X20	860			16X25	1050	12.5X20	900	18X35.5	1135	16X31.5	1070
1000	12.5X20	1145			16X25	1530			16X31.5	1700	16X25	1560	22X40	2600	18X40	2410
2200	16X31.5	1890	16X25	1785	18X40	2231			18X40	2385						
3300	18X35.5	2430	16X35.5	2275	22X40	2785			22X40	3000						
4700	18X40	2890	18X35.5	2700	25X40	3300			25X40	3560						

KR1 Miniature Aluminum Electrolytic Capacitors

Dimension: Φ DXL(mm)

Ripple Current: mA/rms at 120Hz,85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	160V				200V				250V			
	Φ D×L	Ma	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA
0.47	6.3X11	15	5X11	13	6.3X11	15	5X11	13	5X11	12		
1	6.3X11	24	5X11	20	6.3X11	24	5X11	20	6.3X11	17		
2.2	6.3X11	34	5X11	29	6.3X11	34	5X11	29	6.3X11	20	8X11.5	33
3.3	8X11.5	50	6.3X11	43	8X11.5	50	6.3X11	43	10X12.5	38	8X11.5	43
4.7	8X11.5	60	6.3X11	51	8X11.5	60	6.3X11	51	8X11.5	48	10X12.5	51
6.8	8X11.5	56			8X11.5	56			8X11.5	56	10X12.5	60
10	8X11.5	75	10X12.5	83	8X11.5	75	10X12.5	83	10X12.5	90	10X16	105
22	10X16	110	10X20	135	10X16	110	10X20	135	10X20	135	12.5X20	165
33	10X20	205			10X20	205			12.5X20	210	12.5X25	220
47	12.5X20	250			12.5X20	250			12.5X20	240	12.5X25	260
68	12.5X25	370			12.5X25	370			16X25	390		
100	16X25	460			16X25	460			16X31.5	450		
120	16X25	550			16X25	550			16X31.5	560		
150	16X31.5	580			16X31.5	580			16X31.5	600		
180	16X31.5	660			16X31.5	660			18X31.5	680		
220	18X35.5	750			18X35.5	750						
330	18X35.5	940			18X35.5	940						
470	18X40	1000			18X40	1000						

Standard Type

V.DC Contents μ F	350V				400V				450V			
	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA	Φ D×L	mA	* Φ D×L	mA
0.47	6.3X11	12	8X11.5	12	6.3X11	12	8X11.5	12	6.3X11	12	8X11.5	12
1	6.3X11	20	8X11.5	22	6.3X11	20	8X11.5	22	6.3X11	20	8X11.5	22
2.2	6.3X11	63	10X12.5	57	6.3X11	63	10X12.5	57	8X11.5	32	10X12.5	35
3.3	8X11.5	86	10X12.5	78	8X11.5	86	10X12.5	78	10X12.5	32	10X16	38
4.7	8X11.5	55	10X12.5	66	8X11.5	55	10X12.5	66	10X12.5	52	10X16	56
6.8	10X12.5	80			10X12.5	80			10X12.5	80		
10	10X16	105	10X20	115	10X16	105	10X20	115	10X20	100	12.5X20	105
22	12.5X20	190	12.5X25	200	12.5X20	190	12.5X25	200	12.5X25	150	16X25	165
33	12.5X25	230	16X25	250	12.5X25	230	16X25	250	16X25	190		
47	16X25	270	16X31.5	290	16X25	270	16X31.5	290	16X25	260	16X31.5	280
68	16X31.5	310	18X25	330	16X31.5	310	18X25	330	18X31.5	370	18X35.5	390
100	18X31.5	440	18X35.5	450	18X31.5	440	18X35.5	450	18X35.5	400	18X40	420
120	18X40	520			18X40	520			18X45	510		
150												

V.DC Contents μ F	500V	
	Φ D×L	mA
2.2	8X11.5	63
3.3	10X12.5	78
4.7	10X16	103
10	10X20	174
22	12.5X25	282
33	16X25	438
47	18X31.5	500

Note: Case size in mark of "*" is smaller.