

## KRM Miniature Aluminium Electrolytic Capacitors

### 105°C Standard Capacitors , Series KRM.

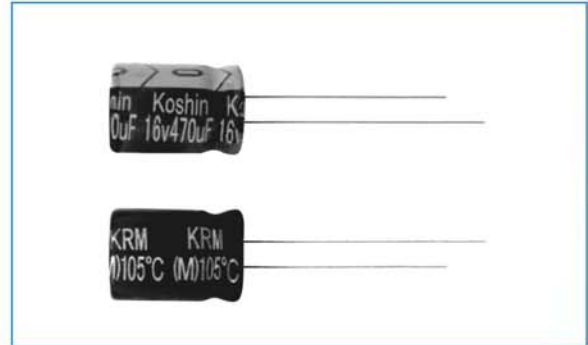
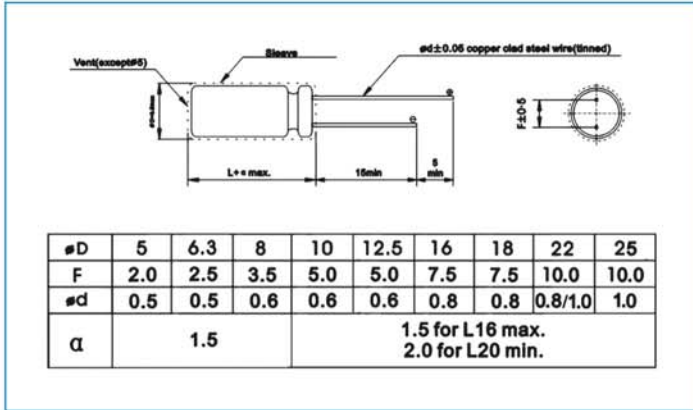
Guaranteed 2000 hours at 105°C

Outline Drawing

Unit: mm

Photo

RoHS



Marking color: white print on black sleeve

### Specifications

No.	Item	Performance
1	Temperature range (°C)	-55 to +105 -40 to +105
2	Leakage current ( $\mu A$ )	6.3 to 100 160 to 450 Less than 0.01CV or 3 whichever is larger(after two minutes) 20°C Less than 0.02CV or 3 (after two minutes) 20°C
3	Capacitance tolerance (%)	$\pm 20$ (20°C, 120Hz)
4	Tangent of the loss angle (Tan $\delta$ )	Rated voltage (V) 6.3 10 16 25 35 50 63 100 160 200 250 350 400 450 Tan $\delta$ (max) 0.22 0.19 0.16 0.14 0.12 0.10 0.09 0.08 0.15 0.15 0.15 0.15 0.15 0.15 (20°C, 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 63 100 160 200 250 350 400 450 Impedance ratio (max) $Z_{(-25^\circ C)}/Z_{(+20^\circ C)}$ 4 3 2 2 2 2 2 2 3 3 3 3 3 3 $Z_{(-40^\circ C)}/Z_{(+20^\circ C)}$ 8 6 4 3 3 3 3 3 8 8 8 6 6 6 (120Hz)
6	Endurance (105°C) (Applied ripple current)	Test time 2000hours Leakage current The initial specified value or less Percentage of capacitance change Within $\pm 20\%$ of initial value Tangent of the loss angle 200% or less of the initial specified value
7	Max Storage temp (105°C)	Test time: 1000 hours; others have same as endurance in No.7. Pretreatment performed JIS-C-5102
8	Applicable standards	JIS-C-5102 and JIS-C- 5141

### Coefficient of Frequency for Ripple Current

Rated voltage (v)	Frequency (Hz) CV( $\mu F \times V$ )	50 · 60	120	1K	10K	100K
		6.3 to 100	CAP $\leq 10$ 0.80 1.00 1.30 1.65 1.70 10 < CAP $\leq 100$ 0.80 1.00 1.23 1.48 1.53 100 < CAP $\leq 1000$ 0.80 1.00 1.16 1.35 1.38 1000 < CAP 0.80 1.00 1.11 1.25 1.28			
160 to 450	0.47 to 330 0.80 1.00 1.30 1.40 1.60					

### Coefficient of Temperature for Ripple Current

Rated voltage (V)	Temperature (°C)	70 or less	85	105
		6.3 to 100	2.00	1.70
160 to 450	1.80	1.40	1.00	

## KRM Miniature Aluminium Electrolytic Capacitors

Dimension:  $\Phi$ DxL(mm)

Ripple Current: mA/rms at 120Hz, 105°C

### DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC $\mu$ F Contents	6.3V				10V				16V				25V					
	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA		
4.7	→																	
10	→																	
22	→				5X11	49					5X11	35						
33	5X11	54					5X11	60					5X11	71				
47	5X11	65					5X11	76					5X11	85				
100	5X11	95					5X11	105					6.3X11	133	5X11	110	6.3X11	142
220	6.3X11	160	5X11	140	6.3X11	175					8X11.5	215	6.3X11	190	8X11.5	236		
330	8X11.5	195	6.3X11	190	8X11.5	245	6.3X11	200	8X11.5	270					10X12.5	335	8X11.5	310
470	8X11.5	270	6.3X11	230	8X11.5	290					10X12.5	370	8X11.5	310	10X16	440	10X12.5	380
1000	10X12.5	460	8X11.5	380	10X16	550	10X12.5	460	10X20	640	10X16	560	12.5X20	770	10X20	680		
2200	10X20	810					12.5X20	860	10X20	760	12.5X25	1000	12.5X20	920	16X25	1170	12.5X25	1110
3300	12.5X20	960	10X20	840	12.5X20	1100					16X25	1300	12.5X25	1170	16X31.5	1460	16X25	1440
4700	16X25	1330	12.5X20	1090	16X25	1400	12.5X25	1260	16X31.5	1600	16X25	1480	18X35.5	1780	16X31.5	1710		
6800	16X25	1640	12.5X25	1460	16X31.5	1880	16X25	1690	18X35.5	2170	16X31.5	1930	18X40	2280	18X35.5	2160		
10000	16X31.5	2200	16X25	1990	18X35.5	2560	16X35.5	2400	18X40	2780	18X35.5	2640						
22000	18X40	3270																

V.DC $\mu$ F Contents	35V				50V				63V				100V							
	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA				
0.1	→				5X11	3.2					5X11	3.5								
0.22	→				5X11	4.9					5X11	5.1								
0.33	→				5X11	6					5X11	7.5								
0.47	→				5X11	7.1					5X11	9								
1	→				5X11	13					5X11	15								
2.2	→				5X11	20					5X11	30								
3.3	→				5X11	30					5X11	31								
4.7	5X11	30					5X11	33					5X11	36	6.3X11	40				
10	5X11	46					5X11	50					5X11	54	8X11.5	66	6.3X11	54		
22	5X11	71					5X11	78					6.3X11	86	8X11.5	99	6.3X11	93		
33	6.3X11	90	5X11	75	6.3X11	96	5X11	90	8X11.5	114	6.3X11	100	10X12.5	148	8X11.5	130				
47	6.3X11	110	5X11	90	6.3X11	120					8X11.5	141	6.3X11	130	10X16	180	10X12.5	165		
100	8X11.5	180	6.3X11	150	8X11.5	188					10X12.5	235					12.5X20	320	10X20	265
220	10X12.5	300	8X11.5	270	10X20	355	10X16	300	10X20	450	10X16	335	16X25	570	12.5X25	440				
330	10X16	400	10X12.5	350	10X20	460	10X16	410	12.5X20	540	10X20	510	16X31.5	700	16X25	540				
470	10X20	520	10X16	460	12.5X25	610	10X20	530	12.5X25	720	12.5X20	640	18X35.5	880	16X31.5	715				
1000	12.5X25	920	12.5X20	810	16X25	1080	12.5X25	950	16X31.5	1210	16X25	930	22X40	1760	18X40	985				
2200	16X31.5	1340	16X25	1260	18X35.5	2120	16X35.5	1470	18X40	2340										
3300	18X35.5	1650	16X35.5	1610	22X40	2290	18X35.5	1770	22X40	2510										
4700	18X40	1920	18X35.5	1900	25X40	2610	22X40	2340	25X40	3000										

## KRM Miniature Aluminium Electrolytic Capacitors

Dimension:  $\Phi$ DxL(mm)

Ripple Current: mA/rms at 120Hz, 105°C

### DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\mu$ F	V.DC Contents	160V				200V				250V			
		$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA
0.47		6.3X11	13	5X11	11	6.3X11	14	5X11	12	8X11.5	18		
1		6.3X11	20	5X11	17	6.3X11	21	5X11	18	8X11.5	27		
2.2		6.3X11	29	5X11	25	8X11.5	37	6.3X11	30	8X11.5	41	6.3X11	35
3.3		8X11.5	42	6.3X11	36	8X11.5	45	6.3X11	39	10X12.5	59	8X11.5	50
4.7		8X11.5	50	6.3X11	43	10X12.5	64	8X11.5	54	10X16	93	8X11.5	60
10		10X16	96	10X12.5	87	10X20	115	10X12.5	94	10X20	150	10X16	115
22		12.5X20	180	10X20	158	12.5X20	195	10X20	170	12.5X20	255	10X20	215
33		12.5X20	225	10X20	190	12.5X25	265	12.5X20	240	12.5X25	348	12.5X20	315
47		12.5X25	295	12.5X20	265	16X25	355	12.5X25	315	16X25	468	12.5X25	350
100		16X25	485	12.5X25	425	16X35.5	565	16X25	485	18X40	685	16X35.5	610
220		18X35.5	750	16X31.5	660	18X40	885	18X35.5	835	22X40	945		
330		18X40	865	18X35.5	820								

$\mu$ F	V.DC Contents	350V				400V				450V			
		$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA	$\Phi$ DxL	mA
0.47		8X11.5	18	6.3X11	16	10X12.5	22	8X11.5	18	10X12.5	22	8X11.5	18
1		8X11.5	27	6.3X11	23	10X12.5	32	8X11.5	27	10X12.5	32	8X11.5	27
2.2		10X16	53	8X11.5	41	10X16	53	10X12.5	48	10X16	53	10X12.5	48
3.3		10X16	65	10X12.5	59	10X20	72	10X16	65	10X20	72	10X16	65
4.7		10X20	86	10X16	78	12.5X20	100	10X20	86	12.5X20	100	10X20	86
10		12.5X20	145	10X20	125	12.5X25	160	12.5X20	145	12.5X25	160	12.5X20	145
22		12.5X25	235	12.5X20	210	16X25	265	12.5X25	235	16X25	265		
33		16X31.5	365	16X25	325	16X35.5	410	16X31.5	360	18X35.5	410	16X31.5	360
47		16X35.5	415	16X31.5	395	18X35.5	490	16X35.5	420	18X40	515	16X35.5	420
100		18X40	575			22X40	595			22X45	625		

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