Koshin

KRH Miniature Aluminum Electrolytic Capacitors

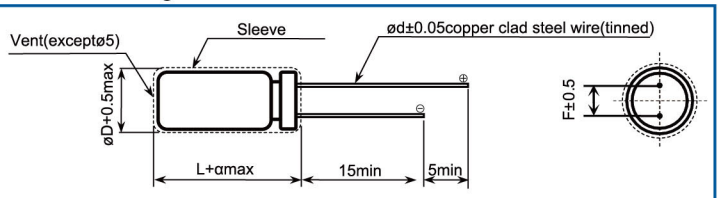
105℃ Use, Long Life Capacitors, Series KRH.

Guarantees 5000 hours at 105℃ (Φ5 to 6.3: 3000hours)

RoHS

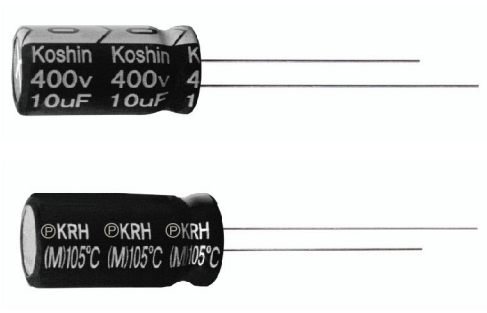
Outline Drawing

Unit: mm



øD	5	6.3	8	10	12.5	16	18	22
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0
ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8/1.0
α	1.5			1.5 for L16 max. 2.0 for L20 min.				

Photo



Marking color: White print on black sleeve

Specifications

No.	Item	Performance										
1	Temperature range(℃)	-40 to +105(6.3V～100V)					-25 to +105(160V～450V)					
2	Leakage current (μA)	Less than 0.01CV or 3 whichever is larger (after one minutes)					Less than 0.03CV or 3 whichever is larger (after one minutes)					
		C: Rated Capacitance (μ F). V: Rated voltage (V) 20℃										
3	Capacitance tolerance (%)	±20(20℃,120Hz)										
4	Tangent of the loss angle (Tan δ)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160-250	350-450	20℃ 120Hz
		Tanδ(max)	0. 22	0. 19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	
		0.02 is added to every 1000 μ F increase over 1000 μ F											
5	Low temperature characteristics	Rated voltage (V)		6.3	10	16	25	35	50	63	100	160-250	350-450	120Hz
		Impedance ratio(max)	$Z_{(-25℃)}/Z_{(+20℃)}$	4	3	2	2	2	2	2	2	3	3	
			$Z_{(-40℃)}/Z_{(+20℃)}$	8	6	4	3	3	3	3	3	8	-	
6	Endurance (105℃) (Applied ripple current)	Test time		Φ5 ~ Φ6.3:3000hours, D≥Φ8:5000hours										
		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 (105℃)	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–5101–4(IEC60384)												

Coefficient of Frequency for Ripple Current

Frequency (Hz) / Capacitance (μ F)	120	400	1K	10K	100K
CAP ≤ 10	1.00	1.62	1.91	2.50	2. 94
10＜CAP ≤ 100	1.00	1.89	1.94	2.54	2.70
100＜CAP	1.00	1.34	1.25	1.73	1.92

Coefficient of Temperature for Ripple Current

Temperature(℃)	65	85	105
Coefficient	2.00	1.65	1.00

DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension: ΦDXL(mm)
Ripple Current: mA/rms at 120Hz,105℃

V.DC / Contents μF	6.3V		10V		16V		25V	
	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA
4.7							5X11	28
10					5X11	39	5X11	41
22	5X11	47	5X11	53	5X11	58	5X11	62
33	5X11	57	5X11	62	5X11	66	5X11	83
47	5X11	67	5X11	73	5X11	88	5X11	92
100	5X11	103	5X11	116	6.3X11	138	6.3X11	175
220	6.3X11	191	6.3X11	212	8X11.5	279	8X11.5	314
330	6.3X11	238	8X11.5	313	8X11.5	347	10X12.5	433
470	8X11.5	337	8X11.5	373	10X12.5	466	10X16	575
1000	10X12.5	564	10X16	698	10X20	825	12.5X20	1024
2200	12.5X20	1019	12.5X20	1105	12.5X25	1344	16X25	1639
3300	12.5X20	1287	12.5X25	1462	16X25	1755	16X31.5	1960
4700	16X25	1784	16X25	1885	16X31.5	2072	18X35.5	2530
6800	16X25	1964	16X31.5	2172	18X35.5	2743	22X40	3216
10000	16X31.5	2259	18X35.5	2610	18X40	3127		
15000	18X35.5	2752	18X40	2711	22X40	3757		
18000	18X40	3049	22X40	3132				
22000	22X40	3074						

V.DC / Contents μF	35V		50V		63V		100V	
	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA
0.1			5X11	1			5X11	4
0.22			5X11	3			5X11	6
0.33			5X11	4			5X11	7
0.47			5X11	8			5X11	9
1			5X11	14			5X11	18
2.2			5X11	22			5X11	23
3.3			5X11	33			5X11	37
4.7	5X11	30	5X11	41	5X11	44	5X11	44
10	5X11	44	5X11	59	5X11	65	6.3X11	67
22	5X11	74	6.3X11	99	6.3X11	96	8X11.5	121
33	5X11	88	6.3X11	127	8X11.5	160	10X12.5	183
47	6.3X11	132	6.3X11	146	8X11.5	191	10X16	243
100	8X11.5	220	8X11.5	252	10X12.5	276	12.5X20	435
220	10X12.5	374	10X16	560	10X20	554	16X25	1011
330	10X16	512	10X20	756	12.5X20	757	16X31.5	1179
470	10X20	664	12.5X20	881	12.5X25	987	18X40	2222
1000	12.5X25	1241	16X25	1626	18X31.5	1843		
2200	16X31.5	1783	18X35.5	2212	18X40	2079		
3300	18X35.5	2274	22X40	2828	22X35	2193		
4700	18X40	2875						

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DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension:ΦDXL(mm)
Ripple Current: mA/rms at 120Hz,105℃

V .DC / Contents μF	160V		200V		250V		350V		400V		450V	
	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA
0.47	6.3X11	14	6.3X11	12	6.3X11	9						
1	6.3X11	21	6.3X11	19	6.3X11	19	6.3X11	24	6.3X11	25	6.3X11	24
2.2	6.3X11	31	6.3X11	27	6.3X11	35	8X11.5	38	8X11.5	38	8X11.5	34
3.3	8X11.5	45	8X11.5	39	8X11.5	38	8X11.5	57	8X11.5	50	8X11.5	44
4.7	8X11.5	54	8X11.5	61	8X11.5	42	10X12.5	61	10X12.5	63	10X12.5	58
10	10X12.5	88	10X12.5	88	10X12.5	100	10X16	100	10X16	110	10X16	102
22	10X20	133	10X20	138	10X20	168	12.5X20	182	12.5X20	206	12.5X25	323
33	10X20	175	10X20	150	10X20	301	12.5X25	238	12.5X25	264	16X25	338
47	12.5X20	429	12.5X20	250	12.5X20	301	16X25	361	16X25	365	18X25	354
100	16X25	500	16X20	400	16X25	530						
150	18X25	830	18X25	680	18X25	550						
220	16X31.5	855	16X35.5	723	18X35.5	633						
270	16X35.5	972	18X35.5	1039								
330	18X35.5	1083										