Koshin

KLF Miniature Aluminum Electrolytic Capacitors

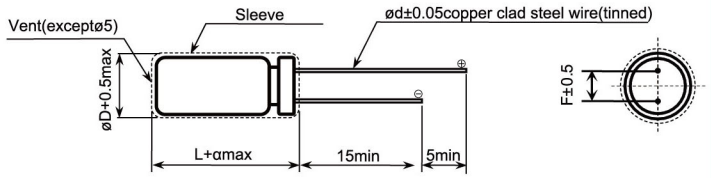
105℃ Use, Long Life Capacitors, Series KLF

Guarantees 5000–10000 hours at 105℃

RoHS

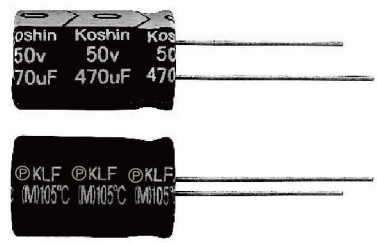
Outline Drawing

Unit: mm



øD	5	6.3	8	10	12.5	16
F	2.0	2.5	3.5	5.0	5.0	7.5
ød	0.5	0.5	0.6	0.6	0.6	0.8
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(10V～50V)					-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)	10	16	25	35	50	160-250	350-450	20℃,120Hz
		Tanδ(max)	0.19	0.16	0.14	0.12	0.10	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)	10	16	25	35	50	160-250	350-450	120Hz
		Impedance ratio(max) $Z_{(-25℃)}/Z_{(+20℃)}$	4	3	2	2	2	3	6	
6	Endurance (105℃) (Applied ripple current)	Test time	D<Φ8:5000 hours,Φ8:8000 hours, D≥Φ10:10000hours							
		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)	120	1K	10K	100K～
Coefficient	0.50	0.80	0.85	1.00

Coefficient of Temperature for Ripple Current

Temperature(℃)	60 or less	85	105
Coefficient	2.00	1.40	1.00

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DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension:ΦDXL(mm)
Ripple Current: mA/rms at 100KHz,105℃

V.DC / Con tents μF	10V		16V		25V		35V		50V	
	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA
6.8									5X11	75
10							5X11	65	5X11	85
22					5X11	105	5X11	120	6.3X11	130
33			5X11	100	5X11	125	6.3X11	155	8X11.5	210
47	5X11	90	5X11	150	6.3X11	200	8X11.5	235	8X11.5	250
68	5X11	115	6.3X11	190	8X11.5	255	8X11.5	280	10X12.5	310
100	6.3X11	185	8X11.5	230	8X11.5	285	10X12.5	360	10X16	450
150	6.3X11	245	8X11.5	260	10X12.5	400	10X16	550	10X20	650
220	6.3X11	310	10X12.5	400	10X16	535	10X20	700	12.5X20	850
330	8X11.5	415	10X1 6	510	10X20	700	12.5X20	900	12.5X25	1000
470	10X12.5	500	10X20	700	12.5X20	950	12.5X25	1020	16X25	1350
1000	10X16	920	12.5X20	1020	12.5X25	1350	16X31.5	1680	18X31.5	1820
2200	12.5X20	1450	16X25	1820	16X31.5	2280				
3300	16X25	1800								

V.DC / Contents μF	160V		200V		250V		350V		400V		450V	
	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA	ΦDXL	mA
6.8							10X20	180	10X20	180	12.5 X20	120
10	10X16	220	10X20	220	10X20	240	12.5X20	220	12.5X20	220	12.5X25	270
22	10X20	350	10X20	350	12.5X20	420	12.5X25	300	16X25	370	16X25	460
33	12.5X20	400	12.5X20	470	12.5X25	580	16X21	350	18X21	420	18X25	500
47	12.5X20	520	12.5X20	520	16X21	650	18X21	500	18X25	600	18X31.5	630
68	12.5X25	700	16X25	700	18X21	830	18X25	630	18X31.5	780		
100	18X21	920	18X21	920	18X25	1020						
150	18X25	1070	18X25	1070	18X31.5	1220						
220	18X25	1130	18X31.5	1300								

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