

KFL series

Features

- ◆ Low impedance for high frequency .Used in communication equipments. Switching power supply, industrial measuring instruments ,ets.
- ◆ Endurance:3000~6000 hours at 105°C
- ◆ RoHS Compliant



Specifications

Item	Performance Characteristics																											
Operating Temperature Range	-40~+105°C																											
Rate Voltage Range	6.3~100 VDC																											
CapacitanceRange	15~3900µF																											
Capacitance Tolerance	±20% (120Hz, +20°C)																											
Leakage current (+20°C,max.)	$I \leq 0.01 CV$ or $3 (\mu A)$ After 2 minute, whichever is greater measured with rated working voltage applied.																											
Dissipation factor (tgδ)	<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>D.F(%)max</td> <td>22</td> <td>19</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>9</td> <td>8</td> </tr> </table> For capacitance >1000uf,Add2% per another 1000uf(120Hz, +20°C)	Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	D.F(%)max	22	19	16	14	12	10	9	8									
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Low Temperature Characteristics (120Hz)	Impedance ratio max. <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Z-25°C/ Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/ Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	Z-25°C/ Z+20°C	4	3	2	2	2	2	2	2	Z-40°C/ Z+20°C	8	6	4	3	3	3	3	3
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Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for the specified period of time at 105°C <table border="1"> <tr> <td>Time</td> <td colspan="2">Φ5to Φ6.3:3000hours, Φ8:4000hours, Φ10:5000hours, Φ13:6000hours</td> </tr> <tr> <td>Rated voltage</td> <td>6.3 to 10Vdc</td> <td>16 to 100Vdc</td> </tr> <tr> <td>Capacitance change</td> <td>≤30% of the initial value</td> <td>≤±25% of the initial value</td> </tr> <tr> <td>D.F(tgδ)</td> <td colspan="2">≤200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="2">≤the initial specified value</td> </tr> </table>	Time	Φ5to Φ6.3:3000hours, Φ8:4000hours, Φ10:5000hours, Φ13:6000hours		Rated voltage	6.3 to 10Vdc	16 to 100Vdc	Capacitance change	≤30% of the initial value	≤±25% of the initial value	D.F(tgδ)	≤200% of the initial specified value		Leakage current	≤the initial specified value													
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Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C5101-4 clause 4.1 at 20°C,they shall meet the specified values for the load life characteristics listed above.																											

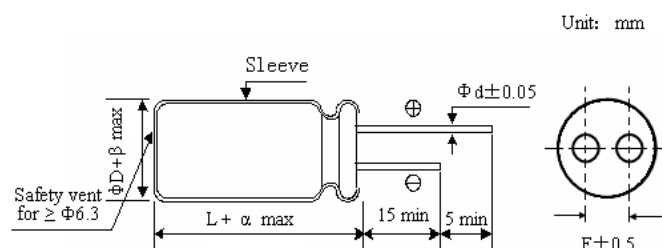
Multiplier for Ripple Current vs. Frequency

CAP(µA)\Frequency (Hz)	120	1K	10K	100K
15~33	0.55	0.70	0.90	1.00
39~330	0.70	0.85	0.95	1.00
470~1000	0.75	0.90	0.98	1.00
1200~3900	0.80	0.95	1.00	1.00

Temperature Multipliers

Temperature(°C)	45	60	85	95	105
Factor	2.10	1.90	1.65	1.25	1.00

Diagram of Dimensions



ΦD	5	6.3	8	10	13
F	2.0	2.5	3.5	5.0	5.0
Φd	0.5	0.5	0.5	0.6	0.6
a	(L < 20)+1.5		(L ≥ 20)+2.0		
	(D < 20)+0.5		(D ≥ 20)+1.0		

KFL series

Standard Ratings

Case size

Φ D×L

Voltage	6.3V			10V			16V			25V		
	Cap(μF)	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance
100	5×11	0.58	210	5×11	0.58	210	6.3×12	0.22	340	6.3×12	0.22	340
120	5×11	0.58	210	5×11	0.58	210	6.3×12	0.22	340			
150	5×11	0.58	210	6.3×12	0.22	340						
220	6.3×12	0.22	340	6.3×12	0.22	340	8×12	0.13	640	8×12	0.13	640
330	6.3×12	0.22	340	8×12	0.13	640	8×12	0.13	640	8×16	0.087	840
470	8×12	0.13	640	8×12	0.13	640	8×16	0.087	840	8×20	0.069	1050
680	8×12	0.13	640	8×16	0.087	840	8×20	0.069	1050	10×20	0.046	1400
820	10×13	0.080	865							10×25	0.042	1650
1000	8×16	0.087	840	8×20	0.069	1050	10×20	0.046	1400	13×21	0.035	1900
1200	8×20	0.069	1050	10×20	0.046	1400	10×25	0.042	1650			
1500	10×20	0.046	1400	10×25	0.042	1650	13×21	0.035	1900	13×25	0.030	2124
2200	10×25	0.042	1650	13×21	0.035	1900	13×25	0.030	2124	13×35	0.020	2880
3300	13×21	0.035	1900	13×25	0.030	2124				16×25	0.021	3098
3900	13×25	0.030	2124									

Max Allowable Ripple Current(mA,rms)at 105℃100KHz,Max Impedance(Ω)at 20℃100KHz

Voltage	35V			50V			63V			100V			
	Cap(μF)	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
15											6.3×12	0.96	115
27	5×11	0.58	210								8×12	0.54	232
33	5×11	0.58	210					6.3×12	0.960	115			
39											8×16	0.36	300
47											10×13	0.344	314
56	6.3×12	0.22	340	6.3×12	0.300	295	8×12	0.504	232	8×20	0.264	362	
68											10×17	0.248	357
82							8×16	0.360	300	10×20	0.168	466	
100				8×12	0.170	555				10×25	0.160	531	
120				8×16	0.120	730	8×20	0.264	362	13×21	0.128	690	
150	8×12	0.130	640	10×13	0.120	760							
180							10×20	0.168	466	13×25	0.096	922	
220	8×16	0.087	840	10×17	0.084	1050	10×25	0.160	531				
270							13×21	0.128	690				
330	10×17	0.060	1210	10×25	0.055	1440	13×25	0.096	922				
470	10×20	0.046	1400	13×21	0.045	1660							
560	10×25	0.042	1650	13×25	0.034	1950							
680	13×21	0.035	1900										
1000	13×25	0.030	2124										

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