



- Extremely low and stable leakage current characteristics
- Close capacitance tolerance $\pm 20\%$ ($\pm 10\%$ on requested)

Item	Performance Characteristics						
Operating Temperature Range	-40 to +105°C						
Rated voltage Range	10 to 63 VDC						
Capacitance Range	0.1 to 1000 μ F						
Capacitance Tolerance	$\pm 20\%$ (120Hz, +20°C)						
Leakage Current (+20°C, max.)	I $\leq$ 0.002 CV or 0.4(μ A) After 2minutes, whichever is greater measured with rated working voltage applied.						
Dissipation Factor (tan δ)	Working Voltage (VDC)	10	16	25	35	50	63
	D.F.(%)max	20	16	14	12	10	10
	(+20°C, at 120Hz)						
Low Temperature Characteristics (at 120Hz)	Impedance ratio max.						
	Working Voltage (VDC)	10	16	25	35	50	63
	Z (-25°C)/Z(+20°C)	6	4	3	3	2	2
Load Life	Test conditions Duration time : 5 $\emptyset$ ~6 $\emptyset$ 1000Hrs D $\geq$ 8 $\emptyset$ 2000Hrs Ambient temperature:+105°C Applied voltage: Rated DC working voltage After test requirements at +20°C Capacitance change: $\leq 20\%$ of the initial measured value Dissipation Factor: $\leq 150\%$ of the initial specified value Leakage current: $\leq$ The initial specified value						
Shelf Life	Test conditions Duration time :1000Hrs Ambient temperature:+105°C Applied voltage: None After test requirements at +20°C: Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.						

CAP(μF) \ Hz		50(60)	120	1K	10K	50K~100K
Multiplier	CAP≤10	0.8	1	1.30	1.65	1.70
	10<CAP≤100	0.8	1	1.23	1.48	1.53
	100<CAP≤1000	0.8	1	1.16	1.35	1.38

Temperature (°C)	45	60	70	85	95	105
Multiplier	1.50	1.45	1.30	1.25	1.15	1.00

Technical drawing of a Safety Device showing front, side, and detail views with dimensions and labels.

Labels:

- Sleeve
- Rubber end seal
- $d\phi$
- Safety Device

Dimensions:

- Length: $L \pm 1.5$ max
- End Seal Thickness: 15min 5min
- Force: $F \pm 0.5$
- Outer Diameter: $D \pm 0.5$

D ϕ	5	6.3	8	10	13
F	2.0	2.5	3.5	5.0	5.0
d ϕ	0.5			0.6	

LLK Low Leakage Current, 105°C

Case Size

φD x L (mm)

W.V. {S.V.}	10 {13}		16 {20}		25 {32}		35 {44}		50 {63}		63 {79}	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1	→								5x11	1.0	5x11	1.3
0.22	→								5x11	2.3	5x11	2.9
0.33	→								5x11	4.0	5x11	4.2
0.47	→								5x11	8.0	5x11	8.0
1	→								5x11	10	5x11	10
2.2	→								5x11	20	5x11	20
3.3	→								5x11	28	5x11	30
4.7	→								5x11	33	5x11	38
10	→				5x11	42	5x11	46	5x11	51	6.3x11	55
22	→		5x11	60	5x11	63	5x11	68	6.3x11	75	6.3x11	91
33	5x11	66	5x11	70	5x11	76	5x11	83	6.3x11	99	8x11	110
47	5x11	77	6.3x11	109	6.3x11	116	6.3x11	121	6.3x11	138	8x11	149
100	5x11	116	5x11 6.3x11	125 138	6.3x11	149	8x11	187	10x12	198	10x20	248
220	6.3x11	193	8x11	237	8x11 10x12	247 253	10x12	330	10x20	380	13x21	440
330	8x11	270	8x11	286	10x12	369	10x20	440	13x21	506	13x26	594
470	8x11	319	8x11 10x12	350 407	10x20	484	13x21	572	13x26	671	-	-
1000	10x15	605	10x20	704	13x21	847	13x26	1012	-	-	-	-

•Ripple Current (mA, rms) at 105°C 120Hz