PPHF 100 Series

Applications

- High DC voltage filtering
- PLCC systems, bypassing circuits
- Voltage dividers & multipliers
- HF signal coupling
- Pulses / Fast discharges

Main characteristics

- Compact size
- U_T 2x U_N
- Polypropylene dielectric
- Lightweight
- Climatic category 40/070/21
- Low dielectric losses
- Compliant with SF6 environmental conditions

Execution

- Cylindrical, film-foil winding
- Insulated protective sleeve
- Axial connections with tinned copper wires
- Epoxy-resin end seal

Mounting

- Can be mounted in any position
- Recommended fastening with collar/insulated wraps

1.0 Rated values and operational data

	Nominal voltage U_N	[VDC]	10 k	
		[VAC]	700	50/60 Hz permanent
	Acceptable HF voltage	[V]	< 1000	20 Hz ... 500 kHz lowering see graph
	Test voltage U_T	[VDC]	20 k	1 min, 23 °C
		[VAC]	5 k	50 Hz, 10s
	Surge voltage	$[\hat{V}]$	27 k	wave 1.2 / 50
	Test description at 2 surges/min		1 x +20 kV, then 5 x + 25kV, 1 x –20 kV, 5 x –25 kV wave 1.2/50 5 x + 20 kV, 5 x –20 kV with interrupted wave	

2.0 Capacitance range

C_n =>	100 pF							47 nF

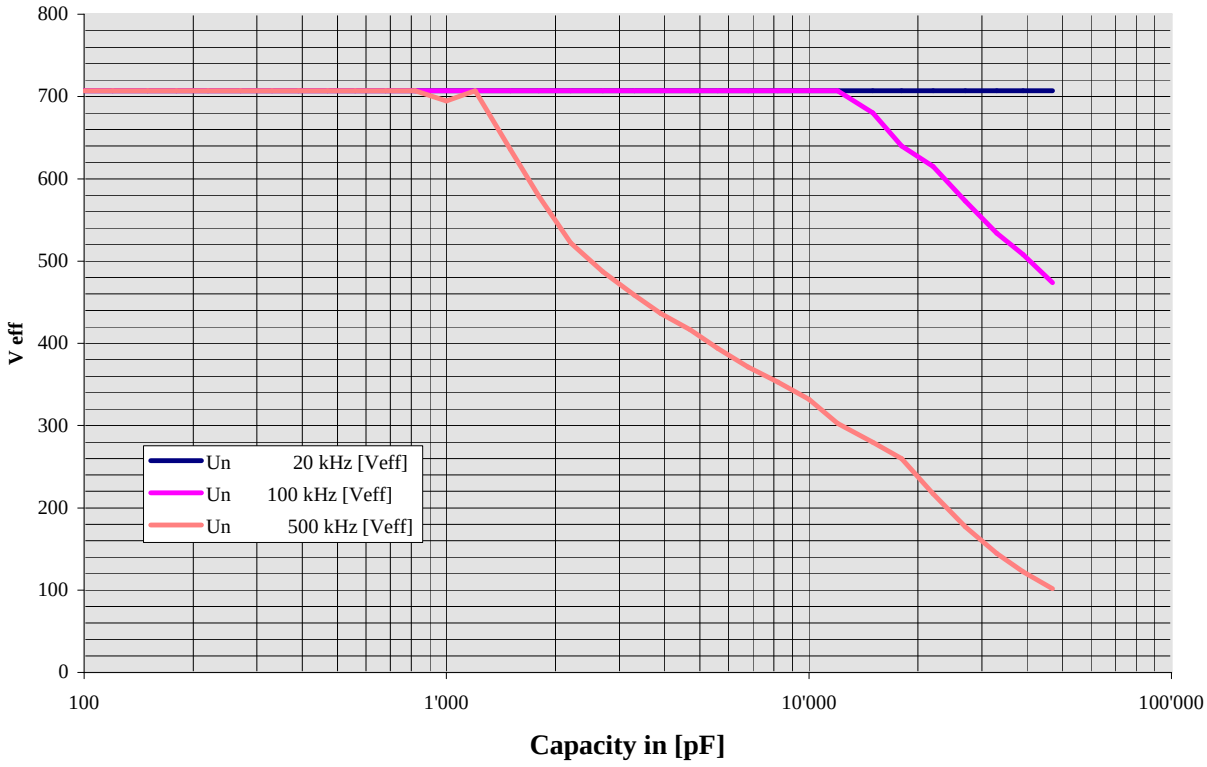
3.0 Characteristics

				Min	Typ	Max
Dissipation factor	tg δ	23 °C, 1 VAC	100 Hz 1 kHz 10 kHz 100 kHz 500 kHz			$5x\ 10^{-4}$ $5x\ 10^{-4}$ $5x\ 10^{-4}$ $10x\ 10^{-4}$ $10x\ 10^{-4}$
Insulation resistance	R_i	1 min, 500 VDC, 23°C	[GΩ]	100		
Self inductance	ESL		[nH/mm]			1
Temperature coefficient	α_c	-40 ... +70°C	[ppm / °C]		-90±70	
Time stability	ΔC / C	1 année	[%]			0.3± 0.4 pF
Humidity relative stability	ΔC / C	50 ... 95 %HR	[%HR]			0.6×10^{-4}
Climatic category	IEC Standard	40/70/21				
Reliability		3200 VAC, 50Hz, time to failure Td > 30 min				

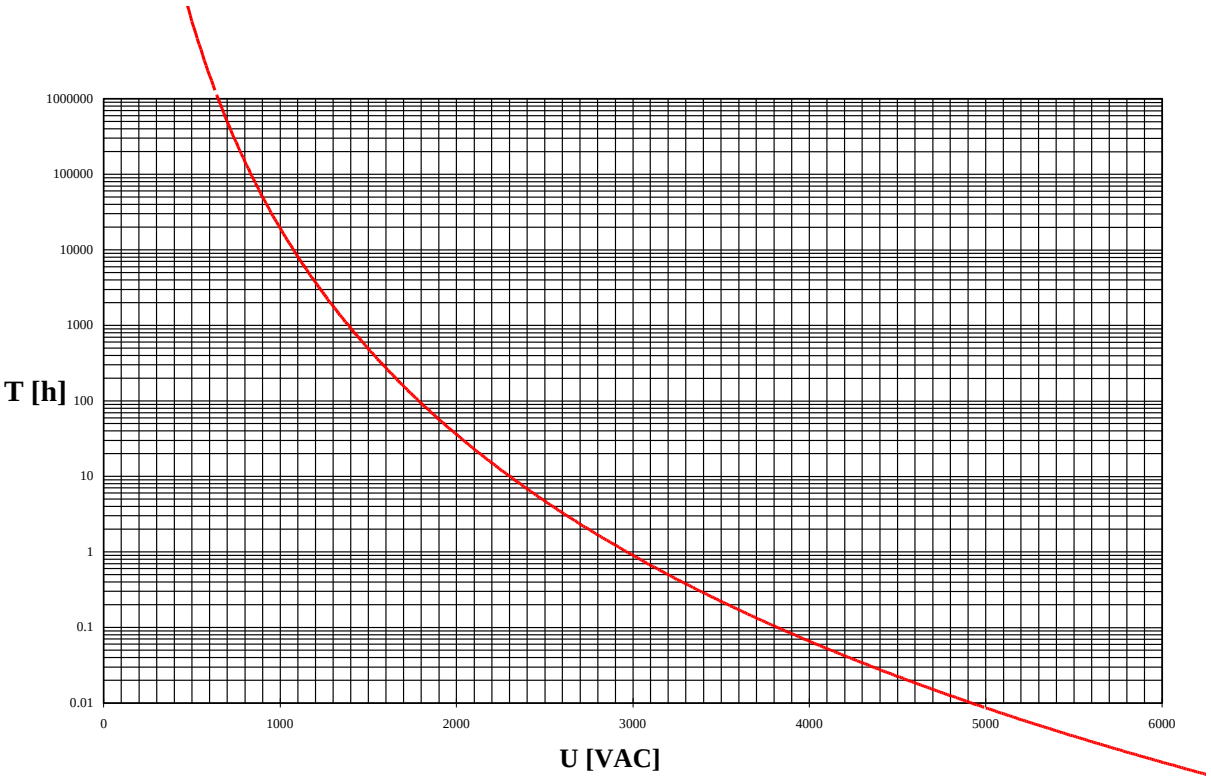
4.0 Operating limits

PPHF 100 Permissible HF Voltage vs. capacity

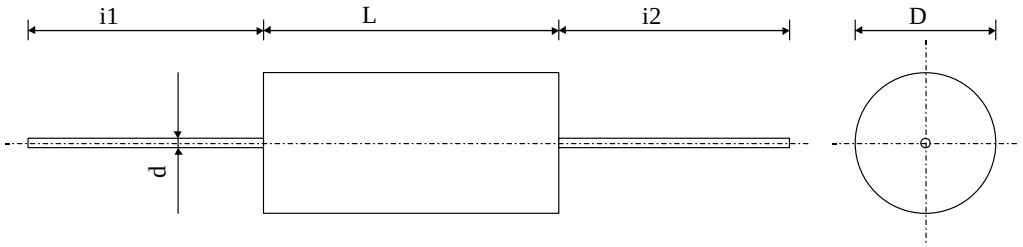
4.1 RMS voltage limits



4.2 Operational lifetime



5.0 Dimensions, shape:



	d	i1, i2
Tinned copper wires	1.5 mm	≥ 60 mm

Capacitors delivered in bulk.

Leclanché Capacitors
A FISCHER & TAUSCHE COMPANY

HIGH FREQUENCY / HIGH VOLTAGE CAPACITORS **Type PPHF 100**

B4F1	Type	Cn	Dimension		Un 20 kHz	Un 100 kHz	Un 500 kHz	I RMS 500 kHz	ESR 500kHz
Pos.		[pF]	ø [mm]	L [mm]	[Veff]	[Veff]	[Veff]	[A]	[mOhm]
1	PPHF 100-310 d K	100	14,5	52,0	707	707	707	0,22	637,6
2	PPHF 100-312 d K	120	14,5	52,0	707	707	707	0,27	531,5
3	PPHF 100-315 d K	150	14,5	52,0	707	707	707	0,33	425,4
4	PPHF 100-318 d K	180	14,5	52,0	707	707	707	0,40	354,7
5	PPHF 100-322 d K	220	14,5	52,0	707	707	707	0,49	290,4
6	PPHF 100-327 d K	270	14,5	52,0	707	707	707	0,60	236,8
7	PPHF 100-333 d K	330	14,5	52,0	707	707	707	0,73	193,9
8	PPHF 100-339 d K	390	14,5	52,0	707	707	707	0,87	164,2
9	PPHF 100-347 d K	470	14,5	52,0	707	707	707	1,04	136,5
10	PPHF 100-356 d K	560	14,5	52,0	707	707	707	1,24	114,7
11	PPHF 100-368 d K	680	14,5	52,0	707	707	707	1,51	94,6
12	PPHF 100-382 d K	820	14,5	52,0	707	707	707	1,82	78,6
13	PPHF 100-210 d K	1.000	16,3	52,0	707	707	695	2,18	64,7
14	PPHF 100-212 d K	1.200	20,0	52,0	707	707	707	2,67	54,1
15	PPHF 100-215 d K	1.500	20,0	52,0	707	707	635	2,99	43,4
16	PPHF 100-218 d K	1.800	20,0	52,0	707	707	579	3,27	36,4
17	PPHF 100-222 d K	2.200	20,0	52,0	707	707	522	3,61	29,9
18	PPHF 100-227 d K	2.700	21,3	52,0	707	707	487	4,13	24,6
19	PPHF 100-233 d K	3.300	23,0	52,0	707	707	459	4,76	20,3
20	PPHF 100-239 d K	3.900	24,5	52,0	707	707	436	5,34	17,3
21	PPHF 100-247 d K	4.700	26,8	52,0	707	707	417	6,15	14,5
22	PPHF 100-256 d K	5.600	28,5	52,0	707	707	394	6,93	12,4
23	PPHF 100-268 d K	6.800	30,8	52,0	707	707	371	7,93	10,4
24	PPHF 100-282 d K	8.200	33,5	52,0	707	707	353	9,09	8,8
25	PPHF 100-110 d K	10.000	36,3	52,0	707	707	332	10,42	7,4
26	PPHF 100-112 d K	12.000	30,6	70,0	707	707	303	11,40	6,3
27	PPHF 100-115 d K	15.000	33,5	70,0	707	680	280	13,19	5,2
28	PPHF 100-118 d K	18.000	35,5	70,0	707	640	260	14,69	4,5
29	PPHF 100-122 d K	22.000	39,6	70,0	707	615	217	15,00	3,9
30	PPHF 100-127 d K	27.000	33,0	100,0	707	573	177	15,00	3,4
31	PPHF 100-133 d K	33.000	35,3	100,0	707	534	145	15,00	2,9
32	PPHF 100-139 d K	39.000	38,0	100,0	707	508	122	15,00	2,6
33	PPHF 100-147 d K	47.000	40,3	100,0	707	474	102	15,00	2,4

The last letter in the part number indicates the capacitance tolerance.

Available tolerances:
K = ±10%.
J = ± 5%
G = ±2%
F = ±1%