

Compact, High-Voltage, Polypropylene Power Capacitors

PPHT...dv

Applications

- High Voltage DC filtering
- High Voltage power supplies
- Voltage dividers and multipliers

Main Characteristics

- Compact size / $U_t = 1.8 U_n$
- Polypropylene film-foil dielectric
- Light-weight
- Capacitance measured at 1 kHz / 23 °C
- Lower Tolerances available on demand
- Climatic category 40/85/21



Design

- Cylindrical winding polyester wrap with plastic sleeve
- M4 axial insert terminals
- Epoxy resin end-seal (UL94-VO)

1. Rated Values and Operational Data

Nominal Voltage	U_N VDC at 40°C	10k	15k	20k
	U_N VDC at 70°C	8.7k	13k	17.3k
	U_N VDC at 85°C	7.5k	11k	15k
Nominal Voltage	U_N VAC at 60°C, 50Hz	830	1250	1660
Test Voltage U_T 1min, 23°C	VDC	18k	27k	36k
Max Dissipation Factor at 1kHz	23°C, 1VAC	11×10^{-4}	6.2×10^{-4}	5.2×10^{-4}
Max Dissipation Factor at 10kHz	23°C, 1VAC	91×10^{-4}	49×10^{-4}	40×10^{-4}

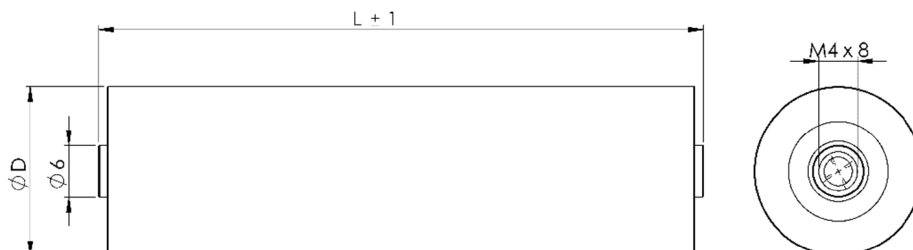
Insulation resistance R_i	500 V / 1 min / 23°C	[MΩ]	$\geq 1 \times 10^5$
Temperature Coefficient	-40...+70°C	[ppm/°C]	-210 ^{±90}

2. Range of Capacitances

Cn =>	500pF	680pF	1nF	1.5nF	2.2nF	3.3nF	4.7nF	5nF	6.8nF	10nF	15nF	20nF	22nF	33nF	47nF	50nF	68nF
10k																	
15k																	
20k																	

3. Dimensions

L = 70mm ±1mm



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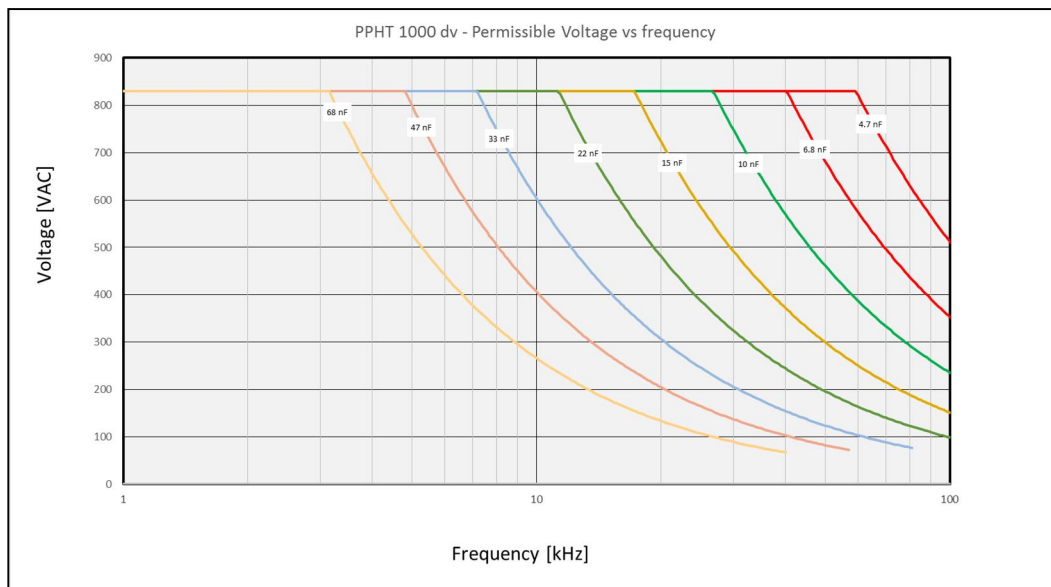
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High Voltage Capacitors 10 kVDC					
	C	ØD	Tanδ 1kHz	ESL	fo
Type	[nF]	[mm]	[E-4]	[µH]	kHz
PPHT 1000-247 K	4.7	19.5	1.6	7	852
PPHT 1000-268 K	6.8	21.0	1.7	10	626
PPHT 1000-110 K	10	22.5	1.8	13	447
PPHT 1000-115 K	15	25.5	2.1	18	309
PPHT 1000-120 K	20	29.0	2.5	23	237
PPHT 1000-122 K	22	29.5	2.6	25	216
PPHT 1000-133 K	33	34.5	3.8	36	147
PPHT 1000-147 K	47	40.5	6.0	49	104
PPHT 1000-150 K	50	41.5	6.5	52	98
PPHT 1000-168 K	68	47.0	10.4	70	73

High Voltage Capacitors 15 kVDC					
	C	ØD	Tanδ 1kHz	ESL	fo
Type	[nF]	[mm]	[E-4]	[µH]	kHz
PPHT 1500-215 K	1.5	19.0	1.5	6	1615
PPHT 1500-222 K	2.2	19.0	1.6	8	1198
PPHT 1500-233 K	3.3	21.0	1.6	10	855
PPHT 1500-247 K	4.7	23.0	1.7	14	629
PPHT 1500-265 K	6.5	25.5	1.8	18	470
PPHT 1500-268 K	6.8	25.9	1.8	18	451
PPHT 1500-110 K	10	30.0	2.0	25	315
PPHT 1500-115 K	15	35.0	2.6	37	215
PPHT 1500-120 K	20	39.5	3.4	48	163
PPHT 1500-122 K	22	41.0	3.7	52	148
PPHT 1500-133 K	33	49.0	6.2	77	100

High Voltage Capacitors 20 kVDC					
	C	ØD	Tanδ 1kHz	ESL	fo
Type	[nF]	[mm]	[E-4]	[µH]	kHz
PPHT 2000-350 K	0.5	18.0	1.5	5	3044
PPHT 2000-368 K	0.68	18.5	1.5	6	2455
PPHT 2000-210 K	1	19.0	1.5	7	1844
PPHT 2000-215 K	1.5	20.2	1.5	9	1338
PPHT 2000-222 K	2.2	22.2	1.6	12	971
PPHT 2000-233 K	3.3	24.9	1.6	17	680
PPHT 2000-247 K	4.7	28.0	1.7	22	493
PPHT 2000-268 K	6.8	32.1	1.9	30	350
PPHT 2000-110 K	10	37.4	2.4	43	242
PPHT 2000-115 K	15	44.3	3.3	63	164
PPHT 2000-122 K	22	52.5	5.2	91	113

4. Operational limits



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