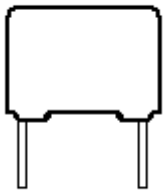
POLYPROPYLENE FILM CAPACITORS

MPB Series

Application:

Used in electronic equipment



Construction:

Dielectric Polypropylene film
Tinned wire
Plastic case, epoxy resin filled, UL94 V0

Electrical Characteristics:

Capacitance range: 10 nF to 6.8 μF

Rated voltage (Vr): 250, 400, 630 Vdc

Category voltage (Vc): up to 85º C Vc= Vr

Between +85ºC and +105ºC a decreasing factor of 1.25% per ºC on the nominal voltage Vr has to be applied.

Insulation Resistance:

Temperature: 25ºC
Voltage charge time: 1 minute.
Voltage charge : 100 Vdc

> 30.000 MΩ for C ≤ 0.33 μF
> 10.000 sec for C > 0.33 μF

Test voltage between terminations: 1.6 Vr applied for 2 sec. at 20ºC +- 5º C.

Dissipation factor (DF %)

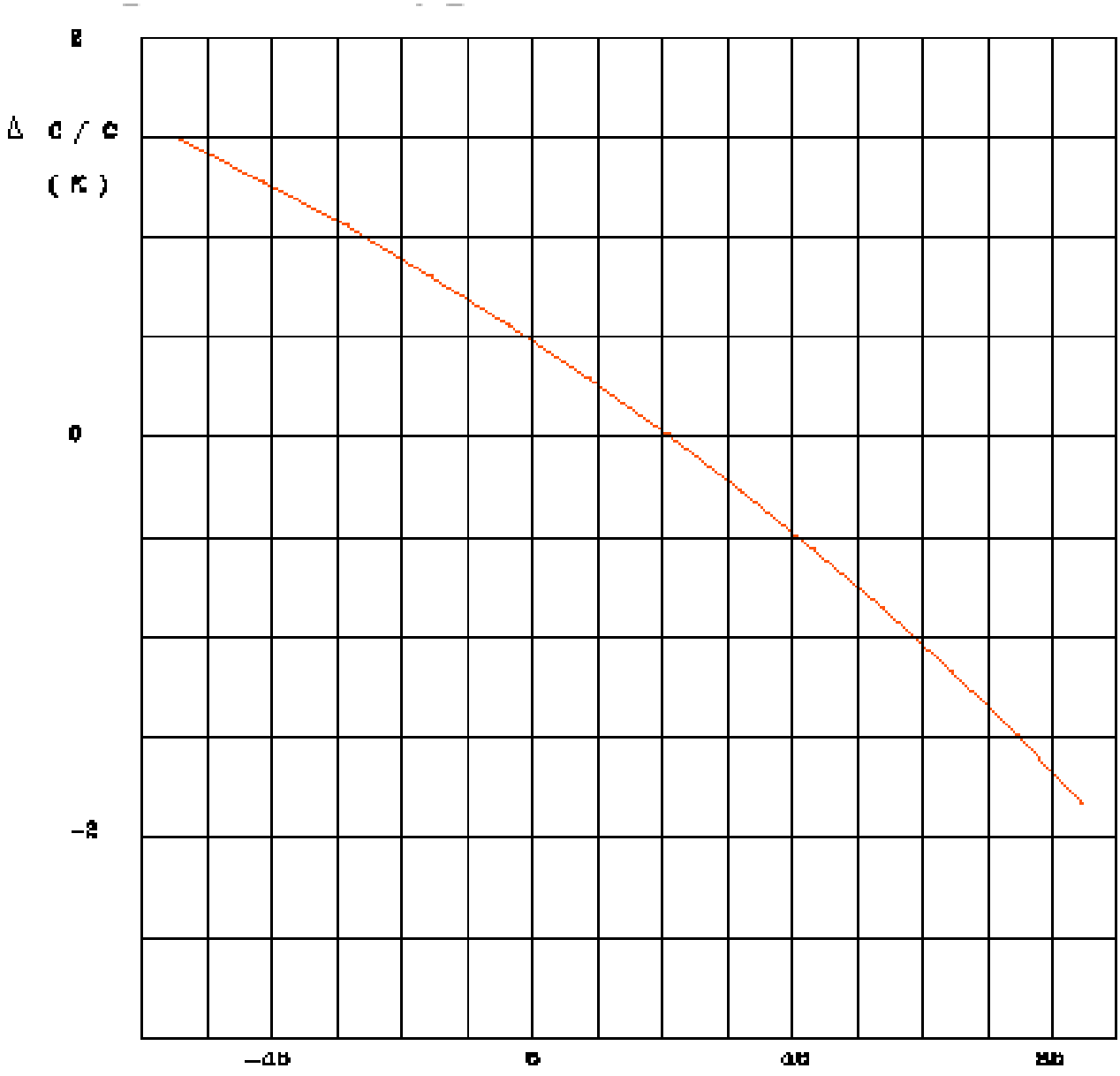
1KHz =< 10 x 10^{-4}
100KHz =< 40 x 10^{-4} C=< 0.1 μF

Electrical endurance:

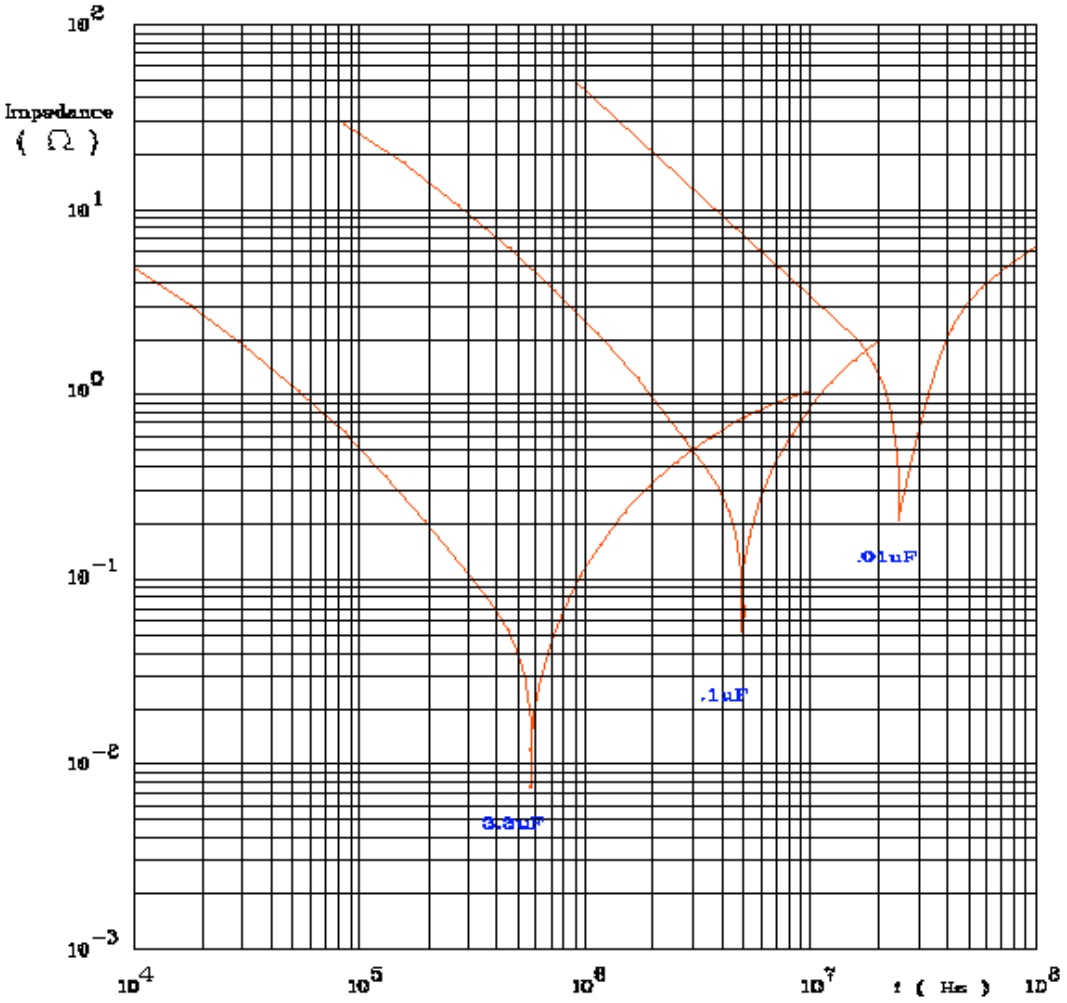
125% of range voltage shall be applied to the capacitor at a tº of +85ºC for 2000 hours. (87,5% of rated voltage shall be applied to the capacitor at tº of 105ºC for 2000 hours). And then the capacitor shall be subjected to standard atmospheric conditions for 1 to 2 hours, after which measurement shall be made. The load resistor in serie with the capacitor shall be 20 Ohm to 1 K Ohm.

Performace: Capacitance change: ΔC/C ≤ ± 3%
DF change dif tang: =< 10 x 10^{-4} at 1 Khz
Insulation resistance: ≥ 50% of limit value

CAPACITANCE AS A FUNCTION OF AMBIENT FREE AIR TEMPERATURE TYPICAL CURVE

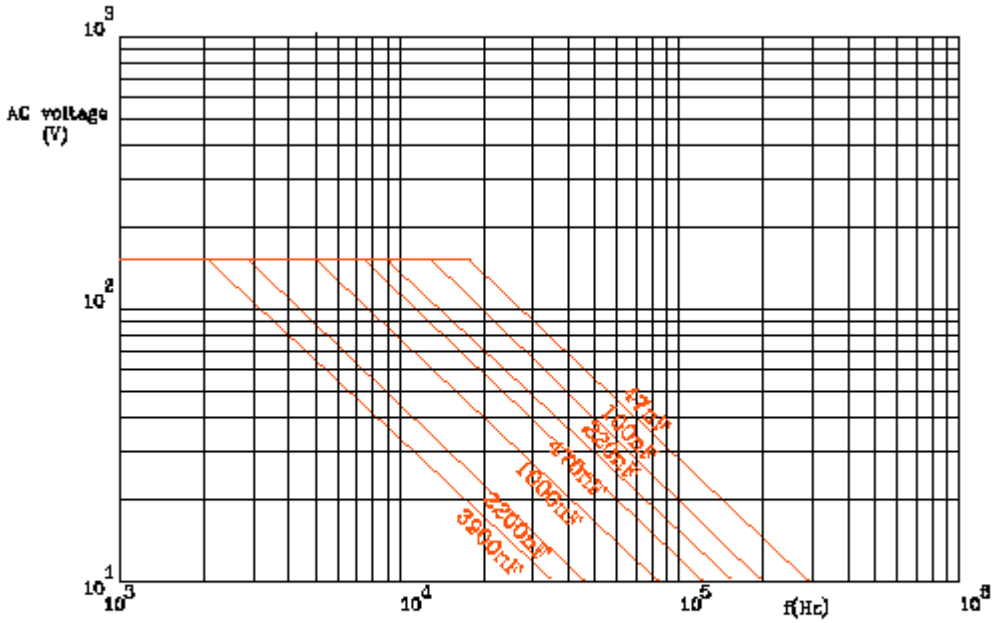


IMPEDANCE AS A FUNCTION OF FREQUENCY
TYPICAL CURVES



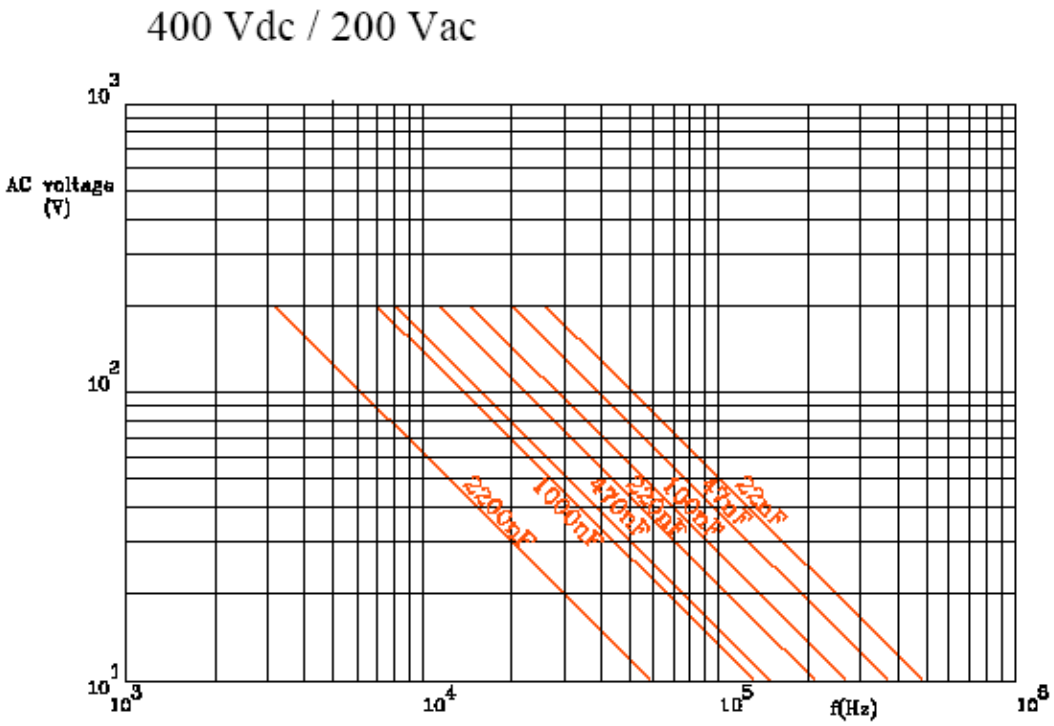
RATED VOLTAGE (Vrms) VERSUS FREQUENCY

250 Vdc / 160 Vac



AC voltage as a function of frequency at Temp≤85°C, for Vrdc=250V

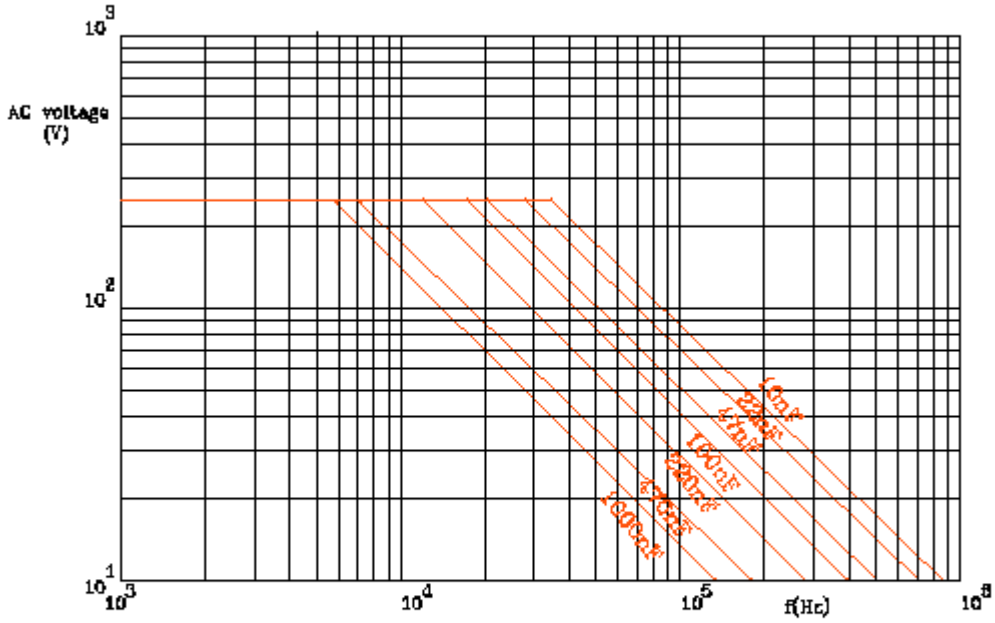
RATED VOLTAGE (Vrms) VERSUS FREQUENCY



AC voltage as a function of frequency at Tamp≤85°C, for Vrdc=400V

RATED VOLTAGE (Vrms) VERSUS FREQUENCY

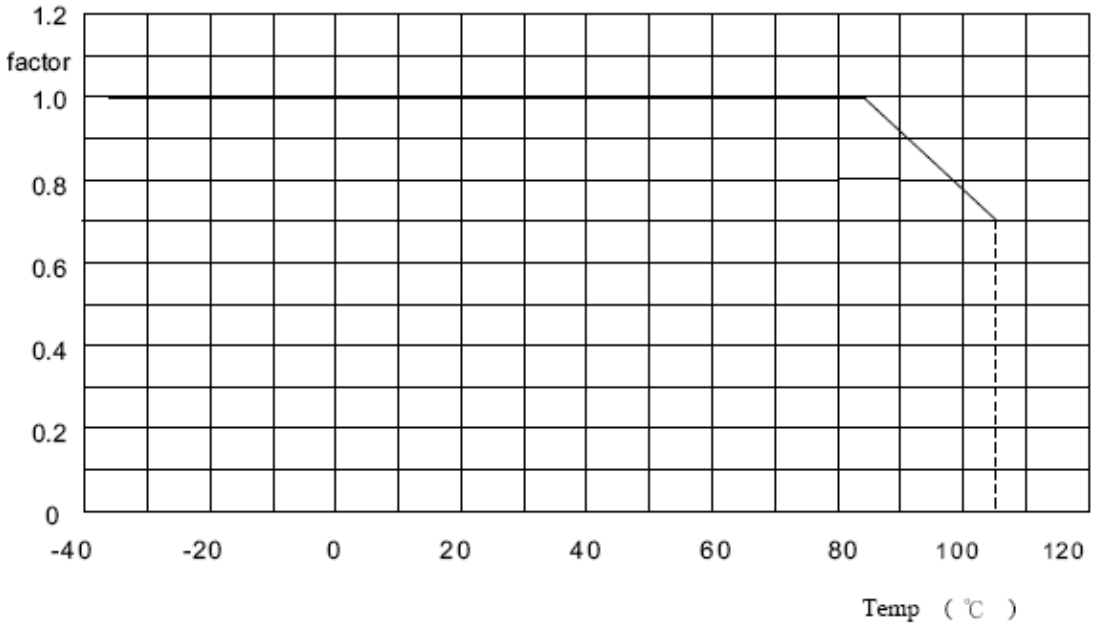
630 Vdc / 250 Vac



AC voltage as a function of frequency at Temp85°C, for Vrdc=630V

MAXIMUM RMS VOLTAGE (SINEWAVE) AS A FUNCTION OF FREQUENCY OF FREQUENCY FOR TEMP > 85º C (VOLTAGE DERATING)

Maximum DC voltage and AC voltage (sinewave) as a function of Temp > 85℃ (voltage derating).



MPB

MPB SERIES

	250 Vdc					400 Vdc					630 Vdc				
	W	H	T	P	d	W	H	T	P	d	W	H	T	P	d
0,01											13	9	4	10	0,6
0,015											13	9	4	10	0,6
0,022											13	10	5	10	0,6
0,033											13	11	5	10	0,6
0,047						13	11	5	10	0,6	13	12	6	10	0,6
0,068	13	11	5	10	0,6	13	11	5	10	0,6	18	11	5	15	0,6
0,1	13	12	6	10	0,6	13	12	6	10	0,6	18	14	7,5	15	0,6
0,1											18	13,5	6	15	0,6
0,15	18	11	5	15	0,6	18	12	6	15	0,6	18	14	7,5	15	0,8
0,22	18	12	6	15	0,8	18	13	7	15	0,8	18	16,5	8,5	15	0,8
0,22						18	13	7	15	0,8					
0,33	18	13	7	15	0,8	18	14,5	8,5	15	0,8	26,5	17,5	8,5	22,5	0,8
0,47	18	14,5	8,5	15	0,8	18	16	10	15	0,8	26,5	19	10	22,5	0,8
0,47						26,5	16,5	7	22,5	0,8					
0,68	18	16	10	15	0,8	26,5	17,5	8,5	22,5	0,8	32	20	11	27,5	0,8
0,68	27	16,5	7	23	0,8										
1MF	27	17,5	8,5	23	0,8	26,5	19	10	22,5	0,8	32	22	13	27,5	0,8
1,5MF	27	20	11	23	0,8	32	22	11	27,5	0,8	32	26	15	27,5	0,8
2,2MF	32	20	11	28	0,8	32	25	14	27,5	0,8	32	30	20	27,5	0,8
3,3MF	32	25	14	28	0,8	32	27,5	17,5	27,5	0,8					
4,7MF	32	27,5	17,5	28	0,8	32	30	20	28	0,8					
6,8MF						32	30	20	28	0,8					