



Hivolt Capacitors Limited

Maydown Industrial Estate, Derry
N. Ireland BT47 6UQ

TPM



The TPM range of capacitors are manufactured using a mixed dielectric material that consists of polyester/polypropylene film and capacitor tissue. They are impregnated and filled with a mineral oil. The container is a Synthetic Resin Bonded Paper tube sealed at both ends with resin assuring hermetic sealing. The capacitors are terminated with M5 x 12mm studs or tinned copper wire.

Note: The impregnant used is a non toxic highly purified and inhibited mineral oil.

Applications: The TPM range is specifically designed for high voltage power supplies, general purpose bypass, coupling, filter applications, electrostatic air cleaners, X-ray power supplies and traction.

Capacitance Range: 0.0005 μ F - 2 μ F. The tolerance is +/-10%. Other tolerances are available on request. Nominal values measured at 1kHz.

Temperature Range: -55°C to 85°C. The nominal voltage rating is applicable from -55°C to 85°C.

Temperature Coefficient: Capacitance will increase by 2% per 100°C temperature rise.

Voltage Range: 1kV - 100kVDC.

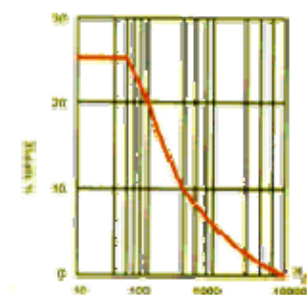


Fig 1.

Ripple: The sum of the peak ripple voltage and the DC voltage should not exceed the rated voltage. Refer to graph fig 1 for permissible peak-to-peak ripple voltage as a percentage of rated voltage for various frequencies.

Test Voltage: V Test

For DC rating <20kV:

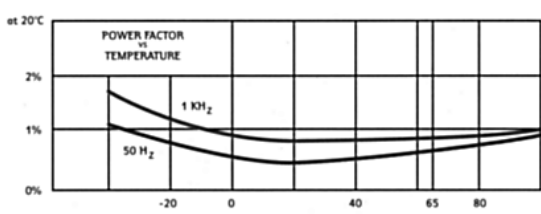
V Test = 2.0 x Rated Voltage for 1 minute.

For DC rating >20kV:

V Test = 1.5 x Rated Voltage for 1 minute.

Fig 2.

Power Factor: Variable; function of temperature and frequency see fig 2.



Nominal value <0.5% at 20°C.

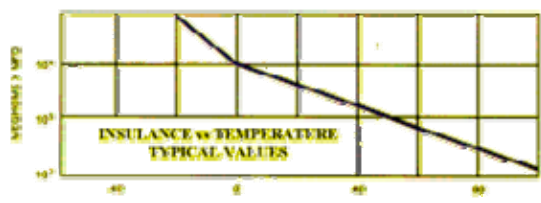


Fig 3

Dielectric Resistance: (Parallel resistance) Indicated by the graph of Insulance (Mohms x μF) vs Temperature (fig 3). The insulance (Mohms x μF) is nominally 10000s at +20°C. (Measurements taken after 1 minute with an applied voltage of 500V)

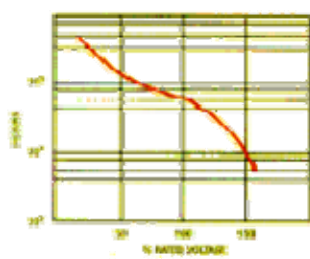


Fig 4

Life expectancy: TPM type capacitors are designed for a life expectancy of 50000 hours at 65°C. To achieve the same life expectancy at 85°C derate to 60% of rated voltage (fig 4).

Weight: The approximate weight in grams may be calculated by multiplying the volume of the capacitor container by 1.2×10^{-3}



Custom designed capacitors are available to meet your specific application. Please complete and return our :-

CAPACITOR APPLICATION QUESTIONNAIRE.

Examples From Product List - Details of other values on request.

Voltage (VDC Wkg)	Part No.	CAP (uF)	L mm	D mm	Voltage (VDC Wkg)	Part No.	CAP (uF)	L mm	D mm
1000	TPM10-103	0.01	42	17	1500	TPM15-103	0.01*	42	17
	TPM10-503	0.05	48	20		TPM15-254	0.25	60	30
	TPM10-254	0.25	60	22		TPM15-504	0.5	110	30
	TPM10-504	0.5	70	30		TPM15-105	1.0	110	35
	TPM10-205	2.0	110	35		TPM15-205	2.0	110	42

2000	TPM20-103	0.01	48	17	3000	TPM30-502	0.005*	42	17
	TPM20-503	0.05	60	17		TPM30-203	0.02	48	20
	TPM20-104	0.1	60	22		TPM30-104	0.1	55	30
	TPM20-254	0.25	60	30		TPM30-504	0.5	75	42
	TPM20-504	0.5	75	35		TPM30-105	1.0	110	42
4000	TPM40-102	0.001*	42	17	5000	TPM50-102	0.001*	42	17
	TPM40-103	0.01	42	20		TPM50-502	0.005*	42	20
	TPM40-503	0.05	60	22		TPM50-103	0.01	48	20
	TPM40-104	0.1	60	30		TPM50-503	0.05	60	25
	TPM40-504	0.5	95	42		TPM50-254	0.25	95	35
6000	TPM60-102	0.001*	55	17	8000	TPM80-502	0.005*	65	20
	TPM60-502	0.005*	65	17		TPM80-103	0.01	80	20
	TPM60-203	0.02	80	20		TPM80-503	0.05	105	35
	TPM60-104	0.1	100	35		TPM80-104	0.1	105	42
	TPM60-254	0.25	135	42		TPM80-254	0.25	170	42
10000	TPM100-102	0.001*	65	17	12000	TPM120-202	0.002*	95	20
	TPM100-103	0.01	80	22		TPM120-103	0.01	115	30
	TPM100-503	0.05	105	35		TPM120-203	0.02	115	35
	TPM100-104	0.1	170	35		TPM120-503	0.05	180	35
	TPM100-254	0.25	205	42		TPM120-104	0.1	180	42
15000	TPM150-102	0.001*	95	17	20000	TPM200-102	0.001*	115	22
	TPM150-502	0.005*	110	20		TPM200-103	0.01	145	30
	TPM150-103	0.01	110	30		TPM200-203	0.02	195	30
	TPM150-503	0.05	150	42		TPM200-503	0.05	245	42
	TPM150-104	0.1	245	42		TPM200-104	0.1	320	42
25000	TPM250-501	0.0005*	145	17	30000	TPM300-501	0.0005*	170	17
	TPM250-102	0.001	145	20		TPM300-202	0.002	170	25
	TPM250-502	0.005	175	30		TPM300-103	0.01	205	35
	TPM250-103	0.01	175	35		TPM300-203	0.02	280	35
	TPM250-503	0.05	300	42		TPM300-303	0.03	280	42
40000	TPM400-102	0.001*	210	20	50000	TPM500-501	0.0005*	275	22
	TPM400-202	0.002	275	20		TPM500-202	0.002	340	22
	TPM400-103	0.01	275	42		TPM500-103	0.01	340	42

DIMENSIONS IN MILLIMETRES +/- 1mm

Add suffix W to Part No. to indicate wire terminations. Capacitance tolerance of 20% is standard with those marked*.