

## TLC RANGE

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## TLC RANGE

The TLC range of capacitors are similar in design to the TPM range but are housed in a more robust container with M6 x 15 axial stud terminals as standard.

## SPECIFICATIONS

They utilise a mixed dielectric material that consists of polyester or polypropylene film and capacitor paper and are impregnated and filled with a mineral oil. The container is a Synthetic Resin Bonded Paper (SRBP) tube sealed at both ends with resin assuring a hermetic seal. The capacitors may be used in air, oil or SF6. They are terminated with M6 studs x 15mm long. (M10 x 20mm studs can also be supplied on request).

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

APPLICATIONS: The TLC range of capacitors are specifically designed for high voltage filters and can be successfully used in the following applications. High Voltage Smoothing; Induction Heating; RF Transmitter Power Supplies; X-Ray Power Supplies.

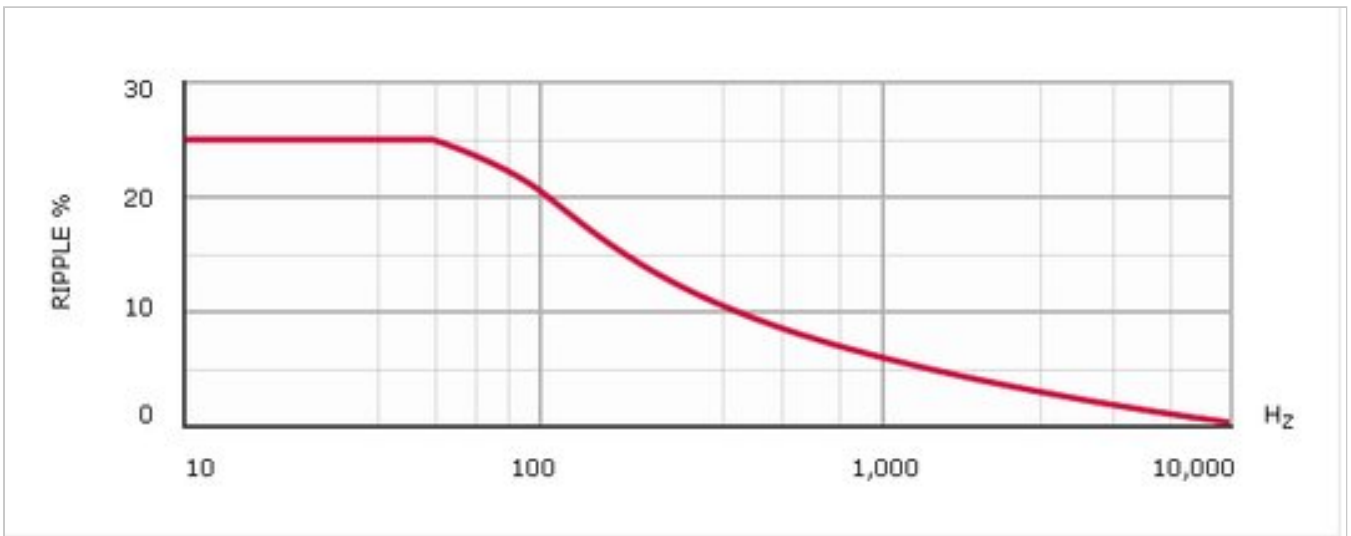
Capacitance Range: 0.001 $\mu$ F – 2 $\mu$ F. The tolerance is +/-10%. Other tolerances are available on request. Nominal values measured at 1kHz.

Temperature Range: -40°C to 85°C. Derating is required for higher operating temperatures.

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

Voltage Range: 1kV – 100kVDC

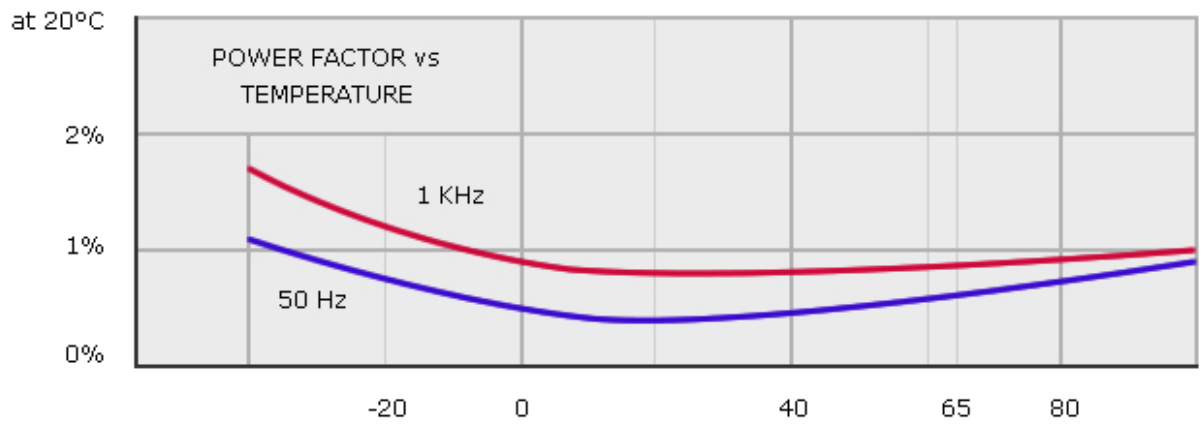
### RIPPLE:



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

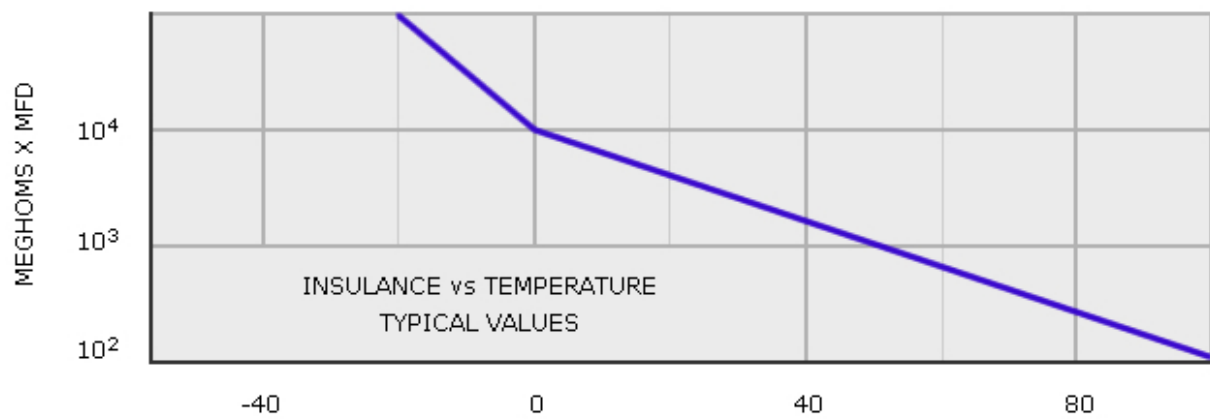
Test Voltage: V Test		
For DC rating <20kV:		V Test = 2.0 x Rated Voltage for 1 minute.
For DC rating $\geq$ 20kV:		V Test = 1.5 x Rated Voltage for 1 minute.
Case to terminal Test voltage = V Test + 1kV		

### POWER FACTOR



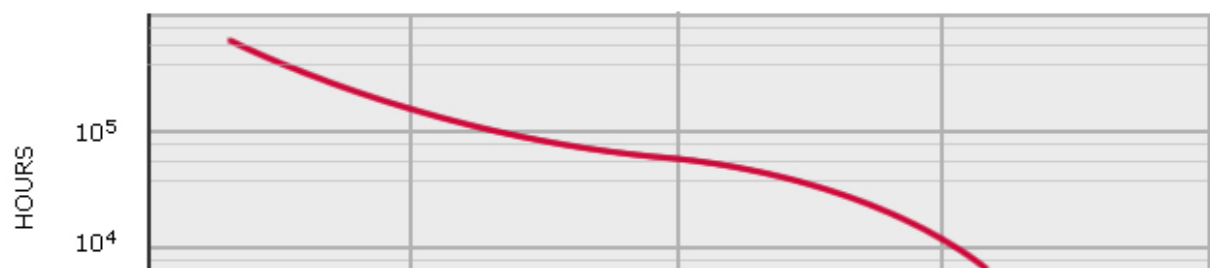
Power Factor: Variable; function of temperature and frequency. See fig 2. Nominal value < 0.5% at 20°C.

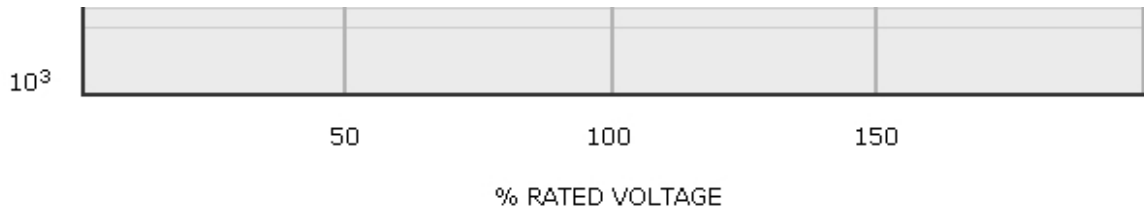
### DIELECTRIC RESISTANCE



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

### LIFE EXPECTANCY

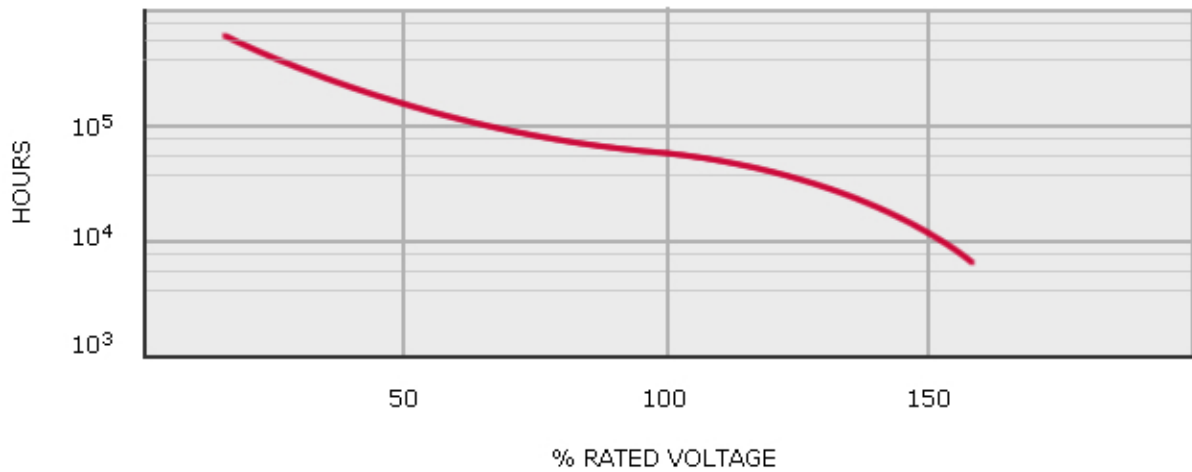




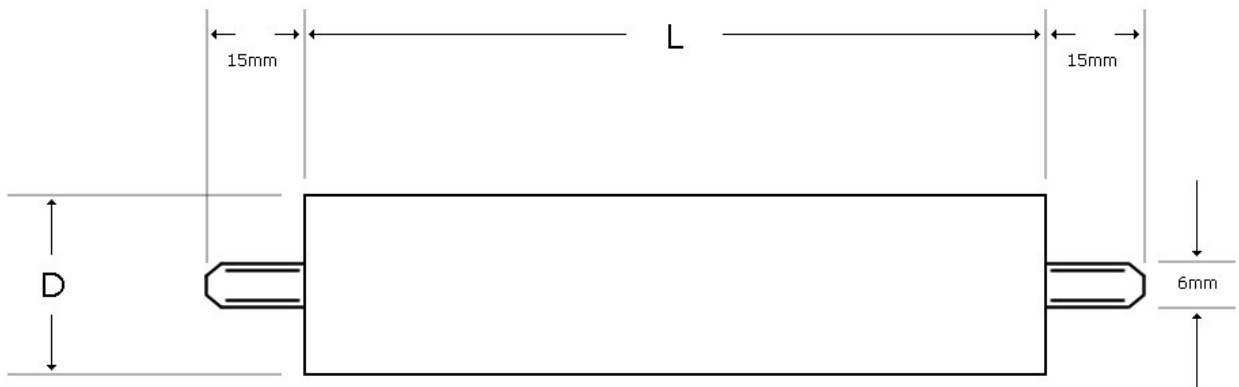
Life expectancy: TLC type capacitors are designed for a life expectancy of 50000 hours at 65°C. To achieve the same life expectancy at 85°C derate to 60% of rated voltage.

## WEIGHT

The approximate weight in grams of capacitors in the TLC range can be estimated by multiplying the volume of the capacitor container by  $1.2 \times 10^{-3}$



## DIMENSIONS



## SELECT WORKING VOLTAGE:

TLC Range



Part No.	Cap $\mu$ F	KiloVolts	L	D
TLC100-104	0.1	10	115	65
TLC100-254	0.25	10	140	75
TLC100-504	0.5	10	205	95
TLC200-503	0.05	20	180	65
TLC200-104	0.1	20	230	65
TLC200-254	0.25	20	280	75
TLC200-504	0.5	20	360	95
TLC300-253	0.025	30	245	65
TLC300-503	0.05	30	320	65
TLC300-104	0.1	30	395	65
TLC300-254	0.25	30	510	75
TLC400-253	0.025	40	305	65
TLC400-503X	0.05	40	410	65
TLC400-104	0.1	40	345	95
TLC400-124	0.12	40	440	95
TLC500-103	0.01	50	270	65

TLC500-253	0.025	50	335	65
TLC500-503	0.05	50	430	75
TLC500-104	0.1	50	430	95
TLC600-502	0.005	60	310	65
TLC600-103	0.01	60	310	75
TLC600-253	0.025	60	390	75
TLC600-503	0.05	60	500	75
TLC600-104	0.1	60	615	95
TLC800-502	0.005	80	400	65
TLC800-103	0.01	80	400	75
TLC800-253	0.025	80	500	95
TLC800-503	0.05	80	650	95
TLC1000-502	0.005	100	485	65
TLC1000-103	0.01	100	485	75
TLC1000-253	0.025	100	690	95
TLC1000-502	0.005	120	425	75

## NOTES:

DIMENSIONS IN MILLIMETRES +/- 1mm

Max. Torque on terminals = 2Nm

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