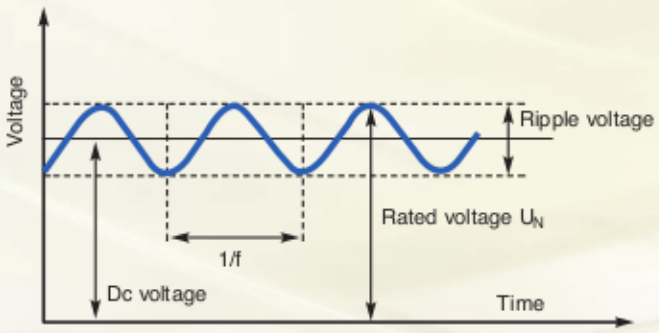
DEFINITIONS

C_N	Rated Capacitance measured at 20°C.
U_N	Maximum operating peak voltage of either polarity of a non reversing type waveform for which the capacitor has been designed for continuous operation.
U_{rms}	Rated rms ripple voltage = 0.1 x U_N max (max 150 V_{rms})
U_S	Surge (not repetitive) peak voltage
U_I	Rated insulation voltage. Rms value of the AC voltage for which the terminal to case insulation has been designed and tested
I_{MAX}	Maximum rms current value for continuous operation
Clearance	Shortest distance in air between terminals conducting parts or between terminal and case
Creepage	Shortest distance along an insulated surface between terminals conducting parts or between terminal and case
Q	Reactive power = $2 \times \pi \times f \times C \times U^2_{rms}$
f	Frequency of the ripple voltage
R_S	Series resistance representing the sum of all ohmic resistances in the capacitor. Rs is a typical estimated value based on average film metallization parameters.
ESR	Equivalent Series Resistance defined as $ESR = R_S + \tan \delta_0 / (2 \times \pi \times f \times C)$
tan δ_0	Dielectric dissipation factor. It can be considered constant in the normal working frequency range. Typical value for polypropylene is 2×10^{-4}
tan δ	Dissipation factor calculated as follows: $\tan \delta_0 + 2 \times \pi \times f \times C \times R_S$
dv/dt	Maximum slope of the voltage waveform
I_{PK}	Peak current $I_{PK} = C\ dV/dt$
P	Active power (losses)=$Q \times \tan \delta_0 + R_s \times I^2_{rms}$

R_{th}	Thermal resistance between the hot-spot in the winding and the environment (natural cooling), so that: $P=(\vartheta_h - \vartheta_0)/R_{th}$ In case of forced air cooling the thermal resistance will be reduced of 20%. R_{th} is a global parameter that doesn't consider localized overheating due to high frequency current.
ϑ_h	Hottest point in the capacitor winding $= R_{th} \times P + \vartheta_0$
ϑ_0	Operating ambient temperature. It is the air temperature measured under steady conditions at 0,1m from the capacitor case and at two-thirds of the height from its base.
Tc	Temperature coefficient of capacitance. The coefficient is equal to –260 ppm/°C
Ln	Expected life at rated voltage U_N and hot-spot temperature of 70°C (65°C for LNK-M3, LNK-M2 and LNK-P3 series)
L	Expected life at the actual working conditions
L_S	Self inductance of the capacitor. It is due to the internal connections, terminals, winding characteristics and physical dimensions.
λ	Failure rate (FIT) = 10^9 x failures/component x hour

Graphical meaning of rated voltage U_N and peak to peak ripple voltage



The maximum allowed rms ripple voltage has to be lower than 10% of the rated voltage U_N (max 150V_{rms})