GENERAL INFORMATION

Rated capacitance:
The capacitance value for which the capacitor has been designed and which is usually indicated upon it..

Category temperature range:
The range of ambitent temperatures for which the capacitor has been designed to operate continuously; this is defined by the temperature limits of the appropriate category.

Upper category temperature:
The maximum ambient temperature for which a capacitor has been designed to operate continuously.

Lower category temperature:
The maximum ambient temperature for which a capacitor has been designed to operate continuously.

Rated temperature:
The maximum ambient temperature at which rated voltage may be continuously applied.

Rated voltage:
The maximum direct voltage or the maxomum r.m.s. alternating voltage or peak value of pulse voltage which may be applied continuously to a capacitor at any temperature between the lower category temperature and the rated temperature.

Category voltage:
The maximum voltage which may be applied continuously to a capacitor at its upper categoory temperature.

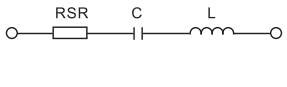
Temperature derated voltage:
For any temperature between the rated temperature and the upper category temperature, the temperature derated voltage is the maximum voltage that may be applied continuously to a capacitor.

Insulation resistance (Ir)/time constant:
The insulation resisance is the ratio between an applied D.C voltage and the resulting leakage current after a minute of charge. It is expressed in MΩ. The time constant is expressed in seconds with the following formula:

$$t(s)=Ir(M\Omega)\times C(\mu F).$$

Pulse rise time (dv/dt):
The pulse rise time defines the capability of a capacitor to withstand high current peaks due to fast voltage changes. The peak current is defined by the following formula:
Ip(peak current)=C×dv/dt
where:Ip in A; C in μF;dv/dt in V/μs

Dissipation factor and equivalent series resistance:
The dissipation factor or tangent of loss angle (tan δ)is the power loss of the capacitor divided by the reactive power of the capacitor at a sinusoidal voltage of specified frequency.
The equivalent series resistance(ESR)is the resistive part of the equivalent circuit composed of capacitance, series resistance and inductance.



Simplified equivalent circuit.

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