



## ■ Terminology

### - Working DC Voltage ( $V_{W(DC)}$ )

This is the maximum continuous DC voltage which maybe applied up to the maximum operating temperature of the device. The rated DC operating voltage (working voltage) also used as the reference point for leakage current. This voltage is always less than the breakdown voltage of the device.

### - Surge Current ( $I_P$ )

This is the maximum peak current which maybe applied for an 8/20 $\mu$ s impulse, with rated line voltage also applied, without causing device failure. The pulse can be applied to the device in either polarity with the same confidence factor.

### - Maximum Energy ( $E_T$ )

This is the maximum rated transient energy which maybe dissipated for a single current pulse at a specified impulse duration (10/1000 $\mu$ s), with the rated DC or RMS voltage applied, without causing device failure.

### - Leakage ( $I_L$ ) at Rated DC Voltage

In the nonconducting mode, the device is at a very high impedance (approaching  $10^9\Omega$ ) and appears as an almost open circuit in the system. The leakage current drawn at this level is very low (<50 $\mu$ A at ambient temperature) and unlike the zener diode, the multilayer varistors have the added advantage that, when operated up to its maximum temperature, its leakage current will not increase above 500 $\mu$ A.

### - Varistor Voltage ( $V_B$ )

This is the voltage at which the device changes from the off state to the on state and enters its conduction mode of operation. The voltage is usually characterized at the 1mA point and has a specified minimum and maximum voltage listed.

### - Clamping Voltage ( $V_C$ )

This is the peak voltage appearing across the suppressor when measured at conditions of specified pulse current and specified waveform (8/20 $\mu$ s). It is important to note that the peak current and peak voltage may not necessarily be coincidental in time.

### - Capacitance (C)

This is the capacitance of the device at a specified frequency(1KHz) and bias(1Vp.p).