

## Glossary

### V

**V** — Volts. The SI unit of electrical potential difference. One volt is the difference in potential between two points of a conducting wire carrying a constant current of one ampere when the power dissipated between these two points is equal to one watt.

**VA** — Volt-ampere. A designation of power in terms of volts and amperes.

**VAR** — A unit of reactive power that means volt-amperes, reactive.

**VARMETER** — An instrument used by power companies to measure the kvar consumption.

**V BAND** — A band of frequencies between 46 and 56 gigaHertz.

**VC** — Varnished-cambric insulation.

**VDE** — Association of German Electrical Engineers.

**VELOCITY OF PROPAGATION** — The transmission speed of an electrical signal down a length of cable compared to its speed in free space. Usually expressed as a percentage.

**VG** — Varnished-glass or nylon braid, 600 V or 3,000 V, 130°C.

**VHF** — Very high frequency, the band extending from 30 to 300 MHz (television channels 2 to 13 and most FM radio) as designated by the Federal Communications Commission.

**VIDEO PAIR CABLE** — A transmission cable containing low-loss pairs with an impedance of 125 ohms. Used for TV pick ups, closed-circuit TV, telephone carrier circuits, etc.

**VISCOSITY** — Internal friction or resistance to flow of a liquid: the constant ratio of shearing stress to rate of shear.

**VLF** — Very low frequencies, the band extending from 10 to 30 kHz, as designated by the Federal Communications Commission.

**VOICE FREQUENCY (VF)** — Describes an analog signal within the range of transmitted speech, typically supported by an analog telecommunications circuit.

**VOICE PAIR CABLE** — A transmission cable containing low-loss pairs with an impedance of 125 ohms. Used for TV pick ups, closed-circuit TV, telephone carrier circuits, etc.

**VOLT** — A unit of electrical "pressure." One volt is the amount of pressure that will cause one ampere of current to flow through one ohm of resistance.

**VOLTAGE** — Electrical potential or electromotive force expressed in volts.

**VOLTAGE BREAKDOWN** — A test to determine the maximum voltage insulated wire can withstand before failure.

**VOLTAGE, CORONA EXTINCTION** — The minimum voltage that sustains corona, determined by applying a corona producing voltage, then decreasing the voltage until corona is extinct.

**VOLTAGE DIVIDER** — A network consisting of impedance elements connected in series to which a voltage is applied and from which one or more voltages can be obtained across any portion of the network.

**VOLTAGE DROP** — The voltage developed across a conductor by the current and the resistance or impedance of the conductor.

**VOLTAGE, INDUCED** — A voltage produced in a conductor by a change in magnetic flux linking that path.

**VOLTAGE RATING** — The highest voltage that may be continuously applied to a wire in conformance with standards or specifications.

**VOLTAGE STANDING WAVE RATIO (VSWR)** — The ratio of the maximum effective voltage to the minimum effective voltage measured along the length of a mismatched radio frequency transmission line.

**VOLTAGE TO GROUND** — The voltage between an energized conductor and earth.

**VOLUME RESISTIVITY** — The resistance in ohms of a body of unit length and unit cross-sectional area.

**VULCANIZATION** — A chemical reaction in which the physical properties of a polymer are changed by reacting it with cross-linking agents.

**VW-1** — Vertical wire flame test. Formerly designated as FR1. A UL fire rating for single conductor cables. The test is described in UL Standard 1581.

### W

**W** — (1) Symbol for watt or wattage, (2) A UL cable type. Heavy duty portable power cable, one to six conductors. 600 V, without grounds.

**WALL THICKNESS** — The thickness of the applied insulation or jacket.

**WATER ABSORPTION** — A test to determine the water absorbed by a material after a given immersion period.

**WATER BLOCKED CABLE** — A multiconductor cable having interstices filled with a water-blocking compound to prevent water flow or wicking.

**WATER COOLED LEADS** — Furnace Cables. High Energy Cables. Usually welding cable strands cabled with a hose core for carrying coolant — used in heavy duty welding equipment, electric furnace applications, plating and various chemical processes.

**WATER TREES** — A type of insulation deterioration that can occur after long term immersion in water with an electrical stress applied.

**WATT** — A unit of electrical power. One watt is equivalent to the power represented by one ampere of current under a pressure of one volt in a DC circuit.

**WAVEFORM** — A graphical representation of a varying quantity. Usually, time is represented on the horizontal axis, and the current or voltage value is represented on the vertical axis.

**WAVE FRONT** — (1) That portion of an impulse (in time or distance) between the 10% point and the point at which the impulse reaches 90% of crest value, (2) the rising part of an impulse wave.

**WAVELENGTH** — The distance between the nodes of a wave. The ratio of the velocity of the wave to the frequency of the wave.

**WAVESHAPE REPRESENTATION** — The designation of current or voltage by a combination of two numbers. For other than rectangular impulses: (a) virtual duration of the wave front in microseconds, (b) time in microseconds from virtual zero to the instant at which one-half of the crest value is reached on the tail. For rectangular impulses: (a) minimum value of current or voltage, (b) duration in microseconds.

