

## Glossary

**CROSS TALK** — A type of interference caused by audio frequencies from one circuit being coupled into an adjacent circuit. The term is loosely used to also include coupling at higher frequencies.

**CRT** — Cathode-Ray Tube. A television-like picture tube used in terminals; CRT is commonly used as a synonym for the CRT terminal.

**CRT WIRE** — High-voltage lead wire for energizing cathode ray tubes.

**CSA (Canadian Standards Association)** — Similar to UL in the United States.

**CSPE** — A jacketing compound based on DuPont's chlorosulfonated polyethylene (Hypalon). Sometimes abbreviated CSP.

**CT** — Cable Tray, NEC Art. 318. A cable marking which indicates a cable is suitable for use in a cable tray.

**CURE** — To change the properties of a polymeric material into a more stable, usable condition by the use of heat, radiation, or reaction with chemical additives. To cross-link.

**CURING CYCLE** — The time, temperature, and pressure required for curing.

**CURL** — The degree to which a wire tends to form a circle after removal from a spool.

**CURRENT** — The rate of transfer of electricity. The unit of current is the ampere, a rate of one coulomb/second.

**CURRENT, ALTERNATING (AC)** — An electric current that periodically reverses direction of electron flow. The number of cycles in a given unit of time (generally a second) is called the frequency of the current.

**CURRENT CARRYING CAPACITY** — The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations. Same as ampacity.

**CURRENT, CHARGING** — The current needed to bring the cable up to voltage; determined by the capacitance of the cable. The charging current will be 90° out of phase with the voltage.

**CURRENT DENSITY** — The current per cross sectional area. Usually in units of amperes/square meter.

**CURRENT, DIRECT (DC)** — Electrical current whose electrons flow in one direction only. It may be constant or pulsating as long as their movement is in the same direction.

**CUT-THROUGH RESISTANCE** — The ability of a material to withstand mechanical pressure without damage.

**CV** — Continuous Vulcanization. An insulation and jacketing curing process.

**CYCLE** — The complete sequence including reversal of the flow of an alternating electric current.

## D

**D/A** — Digital to Analog.

**DAC** — Digital to Analog Converter. A device that converts a digital input signal to an analog output signal carrying equivalent information.

**DATA** — Digitally represented information, which includes voice, text, facsimile, and video.

**dB** — Decibel. The standard unit used to express the relative strength of two signals. When referring to a single signal measured at two places in a transmission system, it expresses either a gain or loss in power between the input and output devices.

**dBmV** — (decibel millivolt) The level at any point in a system expressed in dBs above or below a 1 millivolt/75 ohm standard is said to be the level in decibel-millivolts or dBmV. Zero dBmV is equal to 1 millivolt across an impedance of 75 ohms.

**DC** — Direct current. (see Current, Direct.)

**DCE** — Data Communications Equipment. In common usage, synonymous with modem; the equipment that provides the functions required to establish, maintain, and terminate a connection as well as the signal conversion required for communications between the DTE and the telephone line or data circuit.

**DCL** — Data Carrier Level.

**DC RESISTANCE** — See resistance.

**DEMAND** — (1) The measure of the maximum load of a utility's customer over a short period of time, (2) The load integrated over a specified time interval.

**DERATING FACTOR** — A factor used to reduce the current carrying capacity of a wire when used in environments other than that for which the value was established.

**DETECTOR** — A fiber optic device that picks up light from the fiber and converts the information into an electrical signal.

**DIELECTRIC** — An insulating (nonconducting) medium.

**DIELECTRIC BREAKDOWN** — Any change in the properties of a dielectric that causes it to become conductive. Normally the failure of an insulation because of excessive voltage.

**DIELECTRIC CONSTANT** — The property of an insulation which determines the electrostatic energy stored per unit volume for unit potential gradient. It is expressed as a ratio. "K" for air is 1.0, while that for polyethylene is 2.3. Therefore, the capacitance of polyethylene is 2.3 times that of air. It is also referred to as Specific Inductive Capacity or Permittivity.

**DIELECTRIC DISPERSION** — The change in relative capacitance due to a change in frequency.

**DIELECTRIC HEATING** — The heating of an insulating material when placed in a radio-frequency field, caused by internal losses during the rapid polarization reversal of molecules in the material.

**DIELECTRIC LOSS** — The power dissipated in a dielectric as the result of the friction produced by molecular motion when an alternating electric field is applied.

**DIELECTRIC STRENGTH** — The maximum voltage which an insulation can withstand without breaking down; usually expressed as a gradient in V/mil (volts per mil). Polyethylene for example has a dielectric strength of about 800 V/mil.

**DIELECTRIC STRENGTH TESTING** — A common test performed on electrical products which is often called hi-pot testing. A voltage higher than normal operating voltage is applied across the insulation. This test can increase product reliability by detecting faulty workmanship.

**DIGITAL** — Refers to communications procedures, techniques, and equipment by which information is encoded as either a binary "1" or "0"; the representation of information in discrete binary form, discontinuous in time, as opposed to the analog representation of information in variable, but continuous, waveforms.

