

Glossary

Abrasion Resistance - Ability of a material to resist surface wear.

Ambient Temperature - The temperature of a medium (gas or liquid) surrounding an item.

ASTM - Abbreviation for the American Society for Testing and Materials.

Attenuation (α) - The decrease in signal over distance in the direction of propagation generally expressed as a ratio of the input signal voltage to the output signal voltage in dB.

Bend Radius - The minimum permissible radius for flexure of the cable in both static and dynamic applications.

Braid - Woven or helically wrapped foil or wire used as shielding for insulated wires and cables.

Braid Coverage - A calculated percentage which defines the completeness in which a braid covers the underlying layer.

Braid Angle - The smaller of the two angles formed by the shielding strand and the axis of the cable being shielded.

Breakdown Voltage - The voltage at which the insulation breaks down between two conductors.

Capacitance - The property of two electrical conductors separated by a dielectric material that permits the storage of energy as a result of electrical displacement.

Coaxial Cable - A transmission line with two concentric conductors insulated from each other.

Characteristic Impedance - The ratio of voltage to current at every point along a transmission line on which there are no standing waves.

Cladding - An application method in which one layer of metal is applied to another metal where the junction of the two metals is continuously welded.

Concentricity - The measurement of the location of the conductor with respect to the geometric center of the surrounding insulation.

Conductivity - The capability of a material to carry electrical current.

Cut Off Frequency - The frequency at which the transmission characteristics of a cable may become unstable due to the introduction of modes other than TEM.

Decibel (dB) - Dimensionless unit calculated as ten times the \log_{10} of a power ratio or twenty times the \log_{10} of a voltage ratio.

Dielectric - The insulation between the inner and outer conductor of a coaxial cable.

Dielectric Loss - The transformation of electromagnetic energy into heat within the dielectric material.

Dielectric Strength - The voltage a dielectric material can withstand before breakdown occurs.

Dielectric Withstanding Voltage - The maximum potential gradient that a dielectric material can withstand.

Flex Life - The measurement of a cable to withstand repeated bending.

Frequency - The rate at which current alternates.

Hertz (Hz) - A standard term for cycles per second.

Inductance - The property of a circuit or circuit element that opposes a change in current flow resulting in the flow of current to lag behind the voltage.

Insulation - A material having a high resistance to the flow of current.

Insulation Resistance - The ratio of applied voltage to total current between two conductors in contact with an insulating material.

Microwave - An electromagnetic wave lying between conventional radio and the far infrared frequency range (1 to 300 GHz.)

Phase Stability - Variation in the electrical length of a cable as a function of temperature or mechanical stressing.

Shield - A conductive screen that substantially reduces the effect of electric or magnetic fields on one side thereof, upon devices or circuits on the other side. In cables, a metallic layer (braided or taped) is placed around a conductor or group of conductors to prevent electrostatic or electromagnetic interference between the enclosed wires and external fields.

Standing Wave - Distribution of current and voltage on a transmission line, resulting from two sets of waves traveling in opposite directions.

VSWR (Voltage Standing Wave Ratio) - The ratio of maximum to minimum voltage set up along a transmission line by reflections.

"The difference starts with the cable..."

