



***Society of Cable
Telecommunications
Engineers***

ENGINEERING COMMITTEE
Interface Practices Subcommittee

AMERICAN NATIONAL STANDARD

ANSI/SCTE 108 2012

**Test Method for
Dielectric Withstand of Coaxial Cable**

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1.0 SCOPE AND DEFINITIONS

- 1.1 The purpose of this document is to provide a test standard for detecting flaws in the insulation (sometimes referred to as the dielectric) of a completed coaxial cable. This test, usually referred to as a Hipot or Dielectric Withstand Test, verifies that the insulation can withstand a specified voltage applied between the center conductor and outer conductor for a specified time interval, without resulting in a dielectric breakdown. Upon successful completion of this hipot test, it can be concluded that the inner and outer conductors are properly insulated from each other.
- 1.2 Under normal operating conditions there will be a small amount of leakage current within the dielectric of any product (in this case the insulation between the center and outer conductors of a coaxial cable). However, if 2 conductors are not properly insulated from each other, the application of high voltage can cause dielectric breakdown. Dielectric breakdown results in excessive current flow that is substantially larger than the nominal leakage current for the dielectric material being tested.
- 1.3 Traditionally, either an AC or DC voltage may be used for the test. The DC voltage used should be the peak of the equivalent AC (RMS) voltage, or 1.414 times the AC (RMS) voltage.

2.0 COMPLIANCE NOTATION

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