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ANSI/SCTE 161 2016

Drop Amplifiers

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1. Scope

The purpose of this specification is to recommend mechanical and electrical standards for broadband radio frequency (RF) devices whose primary purpose is to amplify signals presented to an input port and deliver the amplified signals to one or more output ports. The devices are also required to pass signals in a different range of frequencies in the return direction and, optionally, may provide amplification of such return signals. The specification's scope is limited to 75 ohm devices whose ports are provided with F connectors. The most common use for such devices is on-premises RF signal distribution.

Devices covered by this specification include products commonly known as Drop Amplifiers. They may be mounted within Network Interface Device (NID) housings on dwellings or independently within dwellings. They are not intended to be cascaded with other Drop Amplifiers.

Two levels of compliance are specified. Devices meeting all electrical, mechanical and environmental specifications may be specified as meeting the requirements of this specification without qualification. Those meeting electrical and mechanical, but not the environmental requirements specified in Section 6 may be designated as meeting this specification with the suffix "For indoor use only" and the products must be marked as specified herein to guide users in their appropriate application.

The specification is not intended to apply to specialty devices, nor is it intended to limit or restrict any manufacturer's innovation and improvement.

2. Normative References

The following documents contain provisions, which, through reference in this text, constitute provisions of this document. At the time of Subcommittee approval, the editions indicated were valid. All documents are subject to revision; and while parties to any agreement based on this document are encouraged to investigate the possibility of applying the most recent editions of the documents listed below, they are reminded that newer editions of those documents might not be compatible with the referenced version.

2.1. SCTE References

- ANSI/SCTE 01 2015: Specification for "F" Port, Female, Outdoor
- ANSI/SCTE 02 2015: Specification for "F" Port, Female, Indoor
- ANSI/SCTE 06 2015: Composite Distortion Measurements (CSO & CTB)
- ANSI/SCTE 16 2012: Test Procedure for Hum Modulation
- ANSI/SCTE 17 2007: Test Procedure for Carrier to Noise (C/N, CCN, CIN, CTN)
- ANSI/SCTE 45 2012: Test Method for Group Delay
- ANSI/SCTE 48-1 2015: Test Method for Measuring Shielding Effectiveness of Passive and Active Devices Using a GTEM Cell
- ANSI/SCTE 58 2012: AM Cross Modulation Measurements
- ANSI/SCTE 62 2012: Measurement Procedure for Noise Figure
- ANSI/SCTE 81 2012: Surge Withstand Test Procedure
- ANSI/SCTE 115 2011: Test Method for Reverse Path (Upstream) Intermodulation Using Two Carriers
- ANSI/SCTE 124 2011: Specification for "F" Connector, Male, Pin Type
- ANSI/SCTE 129 2007: Drop Passives: Bonding Blocks (Without Surge Protection)
- ANSI/SCTE 135-1 2013: DOCSIS 3.0 Part 1: Physical Layer Specification
- ANSI/SCTE 144 2012: Test Procedure for Measuring Transmission and Reflection
- ANSI/SCTE 153 2008: Drop Passives: Splitters, Couplers and Power Inserters