

# **SCTE** | **STANDARDS**

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**Interface Practices Subcommittee**

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**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 264 2020**

**Broadband Radio Frequency Hardline Taps for Cable  
Systems**

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# Table of Contents

| Title                                                                       | Page Number |
|-----------------------------------------------------------------------------|-------------|
| NOTICE.....                                                                 | 2           |
| Table of Contents.....                                                      | 3           |
| 1. Introduction.....                                                        | 5           |
| 1.1. Executive Summary.....                                                 | 5           |
| 1.2. Scope.....                                                             | 5           |
| 1.3. Benefits.....                                                          | 5           |
| 1.4. Intended Audience.....                                                 | 5           |
| 1.5. Areas for Further Investigation or to be Added in Future Versions..... | 5           |
| 2. Normative References.....                                                | 5           |
| 2.1. SCTE References.....                                                   | 5           |
| 2.2. Standards from Other Organizations.....                                | 6           |
| 2.3. Published Materials.....                                               | 6           |
| 3. Informative References.....                                              | 6           |
| 3.1. SCTE References.....                                                   | 6           |
| 3.2. Standards from Other Organizations.....                                | 6           |
| 3.3. Published Materials.....                                               | 6           |
| 4. Compliance Notation.....                                                 | 7           |
| 5. Abbreviations and Definitions.....                                       | 7           |
| 5.1. Abbreviations.....                                                     | 7           |
| 5.2. Definitions.....                                                       | 7           |
| 6. Mechanical.....                                                          | 8           |
| 6.1. Connectivity Bypass Mechanism.....                                     | 8           |
| 6.2. Power Pass Capability.....                                             | 8           |
| 6.3. Power Extracting Tap Port(s).....                                      | 8           |
| 6.4. Assembled Dimensions.....                                              | 9           |
| 6.5. Form factor.....                                                       | 10          |
| 6.6. RF Ports.....                                                          | 10          |
| 6.7. Plug-ins.....                                                          | 10          |
| 6.8. Attachment Method to Strand and Pedestal.....                          | 10          |
| 6.9. Labeling Designations.....                                             | 11          |
| 7. Electrical.....                                                          | 11          |
| 7.1. RF Performance of Housing.....                                         | 11          |
| 7.2. RF Performance of Tap/Faceplate.....                                   | 12          |
| 7.2.1. Insertion Loss.....                                                  | 13          |
| 7.2.2. Tap Loss.....                                                        | 13          |
| 7.2.3. Return Loss.....                                                     | 14          |
| 7.2.4. Output to Tap Isolation.....                                         | 14          |
| 7.2.5. Tap to Tap Isolation.....                                            | 15          |
| 7.2.6. Passband Response.....                                               | 15          |
| 7.2.7. Group Delay.....                                                     | 15          |
| 7.3. Hum Modulation.....                                                    | 15          |
| 7.4. Shielding Effectiveness.....                                           | 15          |
| 7.5. Surge Withstand.....                                                   | 16          |
| 7.6. Second Harmonic Distortion at the Tap F Port.....                      | 16          |
| 7.7. Common Path Distortion.....                                            | 16          |
| 8. Environmental.....                                                       | 16          |
| 8.1. Salt Spray.....                                                        | 16          |
| 8.2. Temperature.....                                                       | 16          |
| 8.3. Galvanic Compatibility.....                                            | 16          |
| 8.4. Ultraviolet B (UVB) Rays.....                                          | 16          |
| 8.5. Pressure Testing.....                                                  | 17          |

|       |                                                 |    |
|-------|-------------------------------------------------|----|
| 8.6.  | Vacuum Testing .....                            | 17 |
| 8.7.  | Chemical Resistance .....                       | 17 |
| 8.8.  | Highly Accelerated Life Testing (HALT).....     | 17 |
| 8.9.  | Restriction of Hazardous Substances (RoHS)..... | 17 |
| 8.10. | Unboxed Drop Test .....                         | 17 |
| 8.11. | Transportation Mechanical Vibration .....       | 17 |

## List of Figures

| <b>Title</b>                                    | <b>Page Number</b> |
|-------------------------------------------------|--------------------|
| Figure 1 - Mechanical, Tap Front.....           | 9                  |
| Figure 2 - Mechanical, Tap Bottom.....          | 9                  |
| Figure 3 - Housing Bandwidth Test Diagram ..... | 11                 |
| Figure 4 - Insertion Loss Diagram.....          | 13                 |
| Figure 5 - Tap Loss Diagram .....               | 13                 |
| Figure 6 - Return Loss Diagram.....             | 14                 |
| Figure 7 - Output to Tap Isolation Diagram..... | 14                 |
| Figure 8 - Tap to Tap Isolation Diagram .....   | 15                 |

## List of Tables

| <b>Title</b>                                                     | <b>Page Number</b> |
|------------------------------------------------------------------|--------------------|
| Table 1 - Dimension Table.....                                   | 10                 |
| Table 2 - Frequency Points for Insertion Loss and Tap Loss ..... | 12                 |
| Table 3 - Shielding Effectiveness.....                           | 15                 |

# 1. Introduction

## 1.1. Executive Summary

The purpose of this document is to identify common characteristics of hardline taps used in hardline broadband HFC Plant networks.

## 1.2. Scope

The purpose of this document is to recommend mechanical, environmental and electrical standards for broadband radio frequency (RF) devices whose primary purpose is to divide signals presented to an input port among two or more output ports with a fixed division ratio that is nominally independent of frequency within the specified bandwidth limits of the device.

DOCSIS 4.0 specifications include operation at frequencies up to 1794 MHz. Many service providers would like to futureproof their networks for eventual operation up to 3000 MHz. This specification addresses tap faceplates capable of at least 1794 MHz, with a tap housing (base) capable of 3000 MHz.

Products covered by this specification include 2, 4, and 8-way taps.

The devices are intended for an outdoor rated environment.

## 1.3. Benefits

Signal splitting / combining devices are an integral component of a broadband network that provides a uniform method of interconnecting on hardline plant devices with minimal disruption in signal integrity.

## 1.4. Intended Audience

This document is intended as a technical guide for the minimum device requirements for proper operation on hardline plant network.

## 1.5. Areas for Further Investigation or to be Added in Future Versions

- 3 GHz faceplates
- Taps with more than 8 ports
- Intermodulation distortion requirements with full spectral loading

# 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

- [SCTE 81] ANSI/SCTE 81 2018 Surge Withstand Test Procedure
- [SCTE 129] ANSI/SCTE 129 2017 Drop Passives: Bonding Blocks (Without Surge protection)
- [SCTE 143] ANSI/SCTE 143 2018 Test Method for Salt Spray
- [SCTE 144] ANSI/SCTE 144 2017 Test Procedure for Transmission and Reflection

- [SCTE 48-1] ANSI/SCTE 48-1 2015 Test Method for Measuring Shielding Effectiveness of Passive and Active Devices Using a GTEM Cell
- [SCTE 145] ANSI/SCTE 145 2015 Test Method for Second Harmonic Distortion of Passives Using a Single Carrier
- [SCTE 16] ANSI/SCTE 16 2018 Test Procedure for Hum Modulation
- [SCTE 01] ANSI/SCTE 01 2015 Specification for “F” Port, Female, Outdoor
- [SCTE 91] ANSI/SCTE 91 2015 Specification for 5/8-24 RF & AC Equipment Port, Female
- [SCTE 92] ANSI/SCTE 92 2017 Specification for 5/8-24 Plug, (Male), Trunk & Distribution Connectors
- [SCTE 109] ANSI/SCTE 109 2016 Test Procedure for Common Path Distortion (CPD)
- [SCTE 186] ANSI/SCTE 186 2016 Product Environmental Requirements for Cable Telecommunications Facilities

## **2.2. Standards from Other Organizations**

- [IEEE C62.41] IEEE C62.41-1991 – IEEE Recommended Practice for Surge Voltages in Low Voltage AC Power Circuits
- [ASTM G 154] ASTM G 154 Weathering/UV
- [RoHS] RoHS Directive 2011/65/EU – RoHS 2
- [GR-2873] Telcordia GR-2873-CORE – Generic Requirements for Coaxial Drop Passive Elements

## **2.3. Published Materials**

- No normative references are applicable.

## **3. Informative References**

The following documents might provide valuable information to the reader but are not required when complying with this document.

### **3.1. SCTE References**

- No informative references are applicable.

### **3.2. Standards from Other Organizations**

- No informative references are applicable.

### **3.3. Published Materials**

- No informative references are applicable.