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## S T A N D A R D S

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**Interface Practices Subcommittee**

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**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 59 2018**

**Test Method for Drop Cable  
Center Conductor Bond to Dielectric**

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## Table of Contents

<b>1.0</b>	<b>Scope</b>	<b>3</b>
<b>2.0</b>	<b>Equipment</b>	<b>3</b>
<b>3.0</b>	<b>Diagrams</b>	<b>3</b>
<b>4.0</b>	<b>Test Samples</b>	<b>6</b>
<b>5.0</b>	<b>Procedure</b>	<b>6</b>
<b>6.0</b>	<b>Record</b>	<b>6</b>

## 1.0 SCOPE

This document is identical to SCTE 59 2012 except for informative components which may have been updated such as the title page, NOTICE text, headers and footers. No normative changes have been made to this document.

- 1.1. This test is to determine the amount of bond between the center conductor wire to the dielectric (by measuring the force in pounds required to break the bond) for specified flexible RF coaxial drop cables at room temperature.

## 2.0 EQUIPMENT

- 2.1. Safety razor blade, utility knife or equivalent.
- 2.2. Calibrated 12 inch (30.48 cm) ruler or machinist's scale.
- 2.3. Tensile Test Apparatus capable of indicating peak load attained on a calibrated 100 pounds force (45.45 kg force) full scale range with a rate of travel 2 inches per minute.
- 2.4. Test fixture for attachment to the load cell part of the tensile tester. Test dies should have the hole diameters for center conductor insertion that are given in Section 3.0 (Figure 2).

## 3.0 DIAGRAMS

Sample Diagram

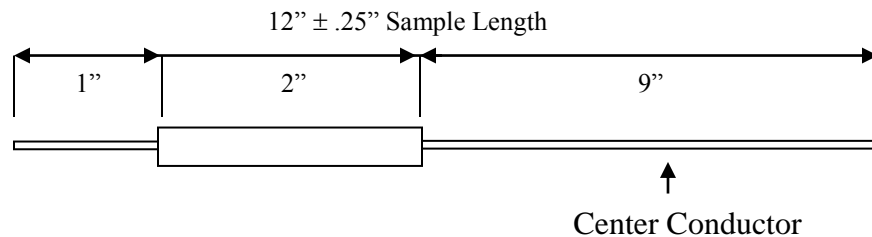


Figure 1

Fixture Diagram

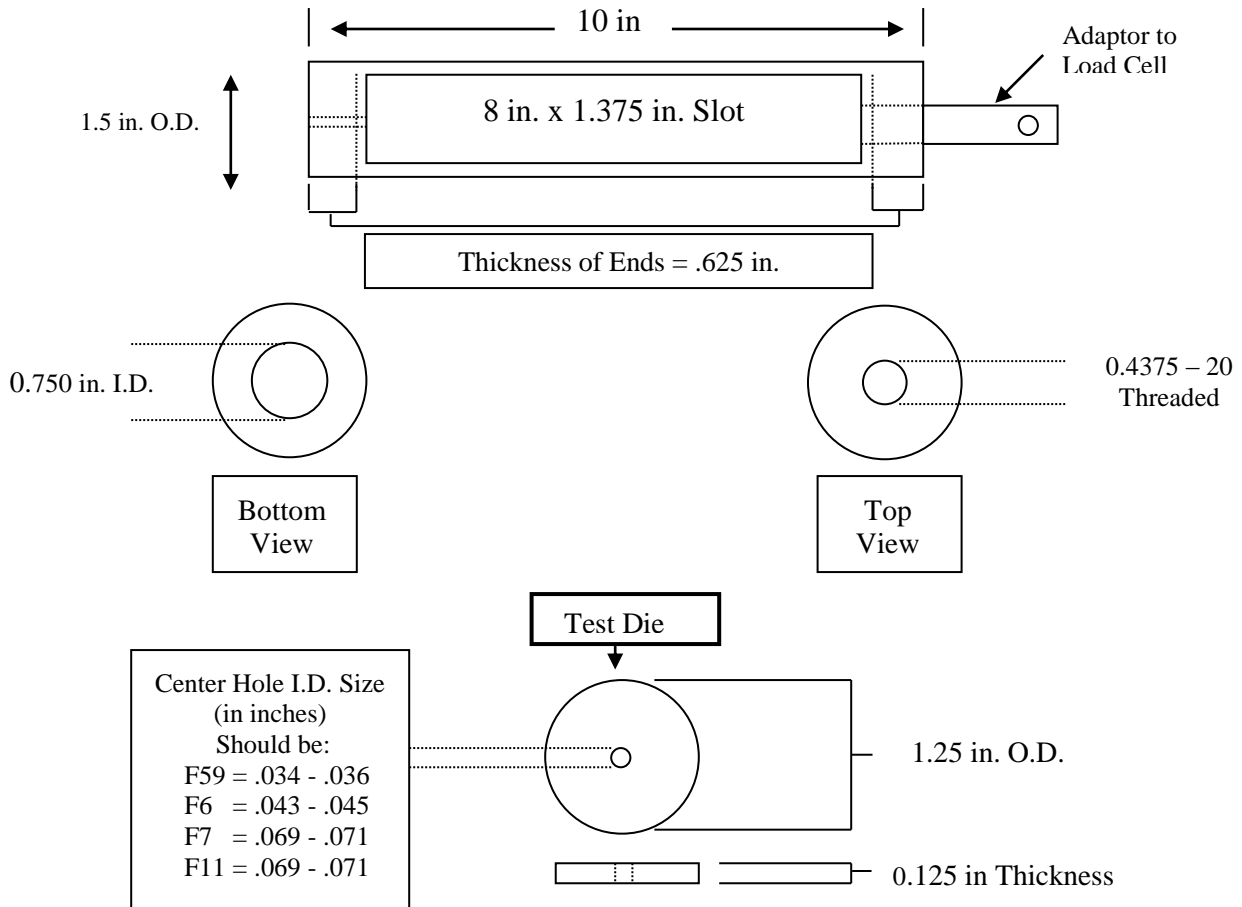
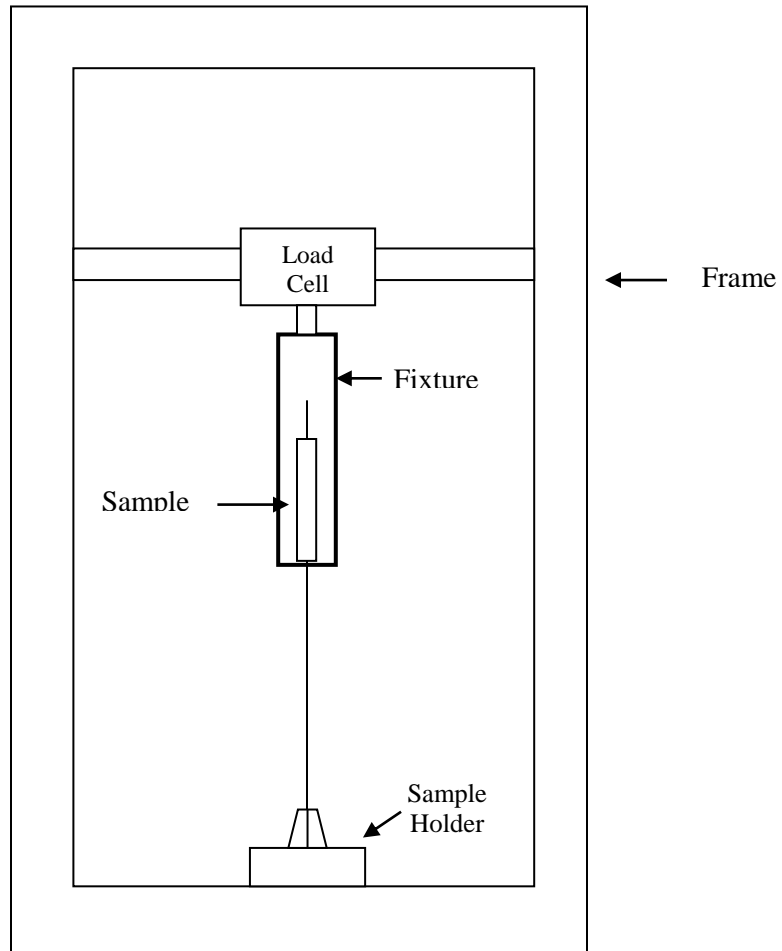


Figure 2

### Tensile Test Apparatus Diagram



**Figure 3**

#### **4.0 TEST SAMPLES**

- 4.1. Test samples of cables 12 inches with a tolerance of  $\pm .25$  inches (30.5 cm  $\pm .635$  cm) are required.

#### **5.0 PROCEDURE**

- 5.1. From a test sample, carefully remove outer jacket and braid from the core. Bonded foil may be left on test specimen. Carefully remove dielectric from each end of the sample as shown in Section 3.0 (Figure 1).

NOTE: It is important not to disturb the remaining 2 inches (5.08 cm) of foam dielectric or score the center conductor during this preparation.

- 5.2. With the test fixture (See Section 3.0 Figure 2) attached to the load cell of the tensile test apparatus, insert the 9 inch (22.86 cm) stripped end of center conductor through the appropriate hole in the test die. Secure the end of the sample into the sample holder of the tensile test apparatus as in Section 3.0 (Figure 3).
- 5.3. With the peak load indicator set to zero, start the tensile test apparatus traveling member at a rate of 2 inches (5.08 cm per minute). Allow it to continue motion until breaking the center conductor adhesion (as evidenced by conductor slippage of the dielectric and no further increase in peak load indication).
- 5.4. Record Peak Value as center conductor adhesion. Samples shall meet the minimum specification for center conductor bond to dielectric.

#### **6.0 RECORD**

- 6.1 Date, Manufacturer, Cable Type, test temperature in degrees Fahrenheit or degrees Celsius and Center Conductor Adhesion as force.