



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 148 2008

Specification for Male “F” Terminator, 75 ohm

NOTICE

The Society of Cable Telecommunications Engineers (SCTE) Standards are intended to serve the public interest by providing specifications, test methods and procedures that promote uniformity of product, interchangeability and ultimately the long term reliability of broadband communications facilities. These documents shall not in any way preclude any member or non-member of SCTE from manufacturing or selling products not conforming to such documents, nor shall the existence of such standards preclude their voluntary use by those other than SCTE members, whether used domestically or internationally.

SCTE assumes no obligations or liability whatsoever to any party who may adopt the Standards. Such adopting party assumes all risks associated with adoption of these Standards, and accepts full responsibility for any damage and/or claims arising from the adoption of such Standards.

Attention is called to the possibility that implementation of this standard may require the use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. SCTE shall not be responsible for identifying patents for which a license may be required or for conducting inquiries into the legal validity or scope of those patents that are brought to its attention.

Patent holders who believe that they hold patents which are essential to the implementation of this standard have been requested to provide information about those patents and any related licensing terms and conditions. Any such declarations made before or after publication of this document are available on the SCTE web site at <http://www.scte.org>.

All Rights Reserved

© Society of Cable Telecommunications Engineers, Inc. 2008
140 Philips Road
Exton, PA 19341

TABLE OF CONTENTS

1.0	SCOPE	1
2.0	DEFINITIONS AND ACRONYMS.....	1
3.0	NORMATIVE REFERENCES	1
4.0	ELECTRICAL REQUIREMENTS.....	2
5.0	MECHANICAL REQUIREMENTS.....	2
6.0	ENVIRONMENTAL REQUIREMENTS.....	2
	FIGURE 1 PHYSICAL REQUIEMENTS.....	3

1.0 SCOPE

The purpose of this specification is to specify requirements of the Male “F” Terminators that are used on “F” ports as specified in ANSI/SCTE 01 2006 and ANSI/SCTE 02 2006. This specification in no way should limit or restrict any manufacturers from innovative designs and product improvements.

2.0 DEFINITIONS AND ACRONYMS

- 2.1 Dielectric: The material that is used to insulate the center conductor from contacting the outer housing.
- 2.2 Thread Relief: A reduced diameter section of the threaded surface to allow the tool to run out. This feature is optional.
- 2.3 Center Conductor: The inner conductor of a coaxial cable or pin of a Male “F” connector.
- 2.4 Reference Plane: The reference plane on the male “F” connector is the mating surface that seats against the female “F” port. It is also the plane from where all horizontal dimensions are taken.

3.0 NORMATIVE REFERENCES

ANSI/SCTE 01 2006, Specification for “F” Port, Female, Outdoor

ANSI/SCTE 02 2006, Specification for “F” Port, Female, Indoor

ANSI/SCTE 144 2007, Test Procedure for Measuring Transmission and Reflection

ANSI/SCTE 48-1 2007, Test Method for Measuring Shielding Effectiveness of Passive and Active Devices Using a GTEM Cell

ANSI/SCTE 98 2004, Test Method for Withstand Tightening Torque - 'F' Male

ANSI/SCTE 60 2004, Test Method for Interface Moisture Migration Double Ended

ANSI/SCTE 48-2 2008, Test Procedure for Measuring Relative Shielding Properties of Active and Passive Coaxial Cable Devices Using Agilent Magnetic Close Field Probe

ANSI/SCTE 143 2007, Test Method for Salt Spray

4.0 ELECTRICAL REQUIREMENTS

4.1 Bandwidth

Shall be a minimum of 5 MHz to 1,002 MHz, unless otherwise specified.

4.2 Impedance

Shall be 75 ohm nominal.

4.3 Return Loss

Shall be ≥ 25 dB, when tested in accordance to ANSI/SCTE 144 2007, Test Procedure for Measuring Transmission and Reflection.

4.4 Shielding Effectiveness

Shall be a minimum of 100dB, when tested in accordance with ANSI/SCTE 48-1 2007, Test Method for Measuring Shielding Effectiveness of Passive and Active Devices Using a GTEM Cell or, ANSI/SCTE 48-2 2008, Test Procedure for Measuring Relative Shielding Properties of Active and Passive Coaxial Cable Devices using Agilent Magnetic Close Field Probe.

5.0 MECHANICAL REQUIREMENTS

5.1 Physical dimensions

The recommended physical dimensions for the male “F” terminator shall be as specified in Figure 1, Table 1.

5.2 Withstand Tightening Torque

Shall withstand a minimum tightening torque of 40 in-lbs. without damage when measured per ANSI/SCTE 98 2004, Test Method For Withstand Tightening Torque – ‘F’ Male.

6.0 ENVIRONMENTAL REQUIRMENTS

6.1 Interface Moisture Migration

No moisture shall migrate into the connector interface when tested according to ANSI/SCTE 60 2004, Test Method for Interface Moisture Migration Double Ended.

6.2 Salt Spray

Shall be exposed to 1000 hours min. continuous salt spray with no degradation in electrical or mechanical performance when tested per ANSI/SCTE 143 2007, Test Method for Salt Spray.

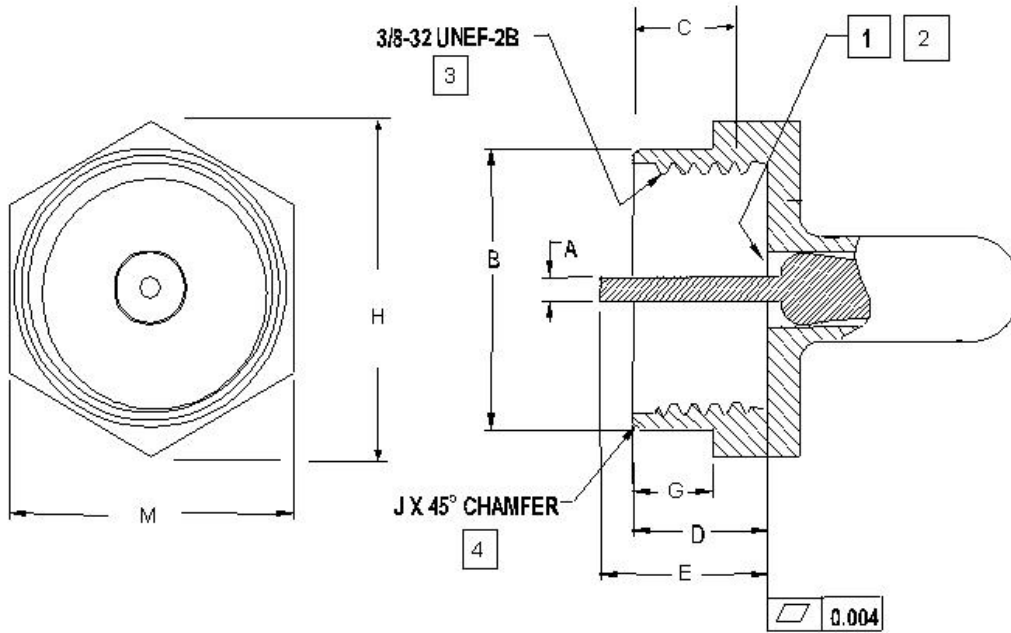


Figure 1: Male 'F' Terminator Physical Requirements.

DESCRIPTION	DIM	mm		Inches		Notes
		min.	max.	min.	max.	
Center Conductor Diameter	A	0.76	1.066	0.030	0.042	
Sealing Sleeve Diameter	B	10.41	11.05	0.410	0.435	
Nut Threaded Length	C	3.97	-	0.156	-	3
Mandrel Face Depth to Nut Leading Edge	D	4.29	6.10	0.169	0.240	
Center Conductor to Mandrel Face Length	E	6.35	9.53	0.250	0.375	
Nut to Sealing Sleeve Interface Length	G	1.78	4.45	0.070	0.175	

Maximum Envelope Dimension	H	-	12.95	-	0.510	
Chamfer Break	J	0.25	0.73	0.010	0.030	4
Nut Dimension Flat-Flat	M	10.97	11.14	0.432	0.438	

NOTES:

1. No Material protrusion allowed beyond reference plane.
2. The Mating of the Female “F” to the Reference Plane should not be impeded
3. Minimum One Thread Lead In
4. Radius Optional
5. Drawing Not to Scale