

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

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**Interface Practices Subcommittee**

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**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 91 2022**

**Specification for 5/8-24  
RF & AC Equipment Port, Female**

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## Document Types and Tags

Document Type: Specification

Document Tags:

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|---|------------------------------------|--|
| <input type="checkbox"/> Test or Measurement          | <input type="checkbox"/> Checklist | <input type="checkbox"/> Facility                  |
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## Document Release History

<b>Release</b>	<b>Date</b>
SCTE 91 2004	<i>4/12/2004</i>
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Note: Standards that are released multiple times in the same year use: a, b, c, etc. to indicate normative balloted updates and/or r1, r2, r3, etc. to indicate editorial changes to a released document after the year.

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## 1. Introduction

### 1.1. Executive Summary

This specification applies to all female 5/8 – 24 equipment ports for RF and AC powering that are used on broadband devices, such as mainline taps / passives, power inserters and actives that are used in the 75 ohm RF broadband communications industry.

### 1.2. Scope

The purpose of this document is to specify the mechanical and environmental requirements of female 5/8 – 24 equipment ports for RF and AC powering that are used in the 75-ohm RF broadband communications industry. This document is compatible with the mechanical requirements as defined by [SCTE 92].

### 1.3. Benefits

This specification is necessary to provide manufacturers and users of this product a basic set of standard mechanical, and environmental performance requirements to ensure proper mating with varied equipment designs. This specification provides confidence to end users that designs which meet these minimum criteria will perform properly in their systems.

### 1.4. Intended Audience

Manufacturers, test laboratories, and end-users.

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

None

## 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 92]      ANSI/SCTE 92 2022 Specification for 5/8-24 Plug, (Male), Trunk and Distribution Connectors

### 2.2. Standards from Other Organizations

No normative references are applicable.

### 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

[SCTE 264] ANSI/SCTE 264 2021, Broadband Radio Frequency Hardline Taps for Cable Systems

[SCTE 265] ANSI/SCTE 265 2021, Broadband Radio Frequency Hardline Passives for Cable Systems

[SCTE 273-1] ANSI/SCTE 273-1 2021, Generic Access Platform (GAP) Enclosure Specification

#### 3.2. Standards from Other Organizations

[ASME Y14.5] ASME Y14.5M-1994 - Dimensioning and Tolerancing

#### 3.3. Published Materials

No informative references are applicable.

### 4. Compliance Notation

<i>shall</i>	This word or the adjective “ <i>required</i> ” means that the item is an absolute requirement of this document.
<i>shall not</i>	This phrase means that the item is an absolute prohibition of this document.
<i>forbidden</i>	This word means the value specified shall never be used.
<i>should</i>	This word or the adjective “ <i>recommended</i> ” means that there may exist valid reasons in particular circumstances to ignore this item, but the full implications should be understood and the case carefully weighted before choosing a different course.
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## 5. Definitions

### 5.1. Abbreviations

lb	pound
in	inch
mm	millimeter
DC	direct current
lb-ft	pound foot
MHz	megahertz
Hz	hertz
SCTE	Society of Cable Telecommunications Engineers

### 5.2. Definitions

Reference Plane	The reference plane on the female 5/8-24 equipment port is the mating surface that seats with the male 5/8-24 port.
Parting Line (relevant to casting process only)	A raised mark left on the surface of a part as a result of the gap between two halves of a die.

## 6. General Requirements

Samples of the finished products *shall* be inspected to ensure that they conform to the physical dimensions specified in this document.

## 7. Physical Dimensions

The physical dimensions for 5/8-24 female equipment ports *shall* be as specified in Figure 1.

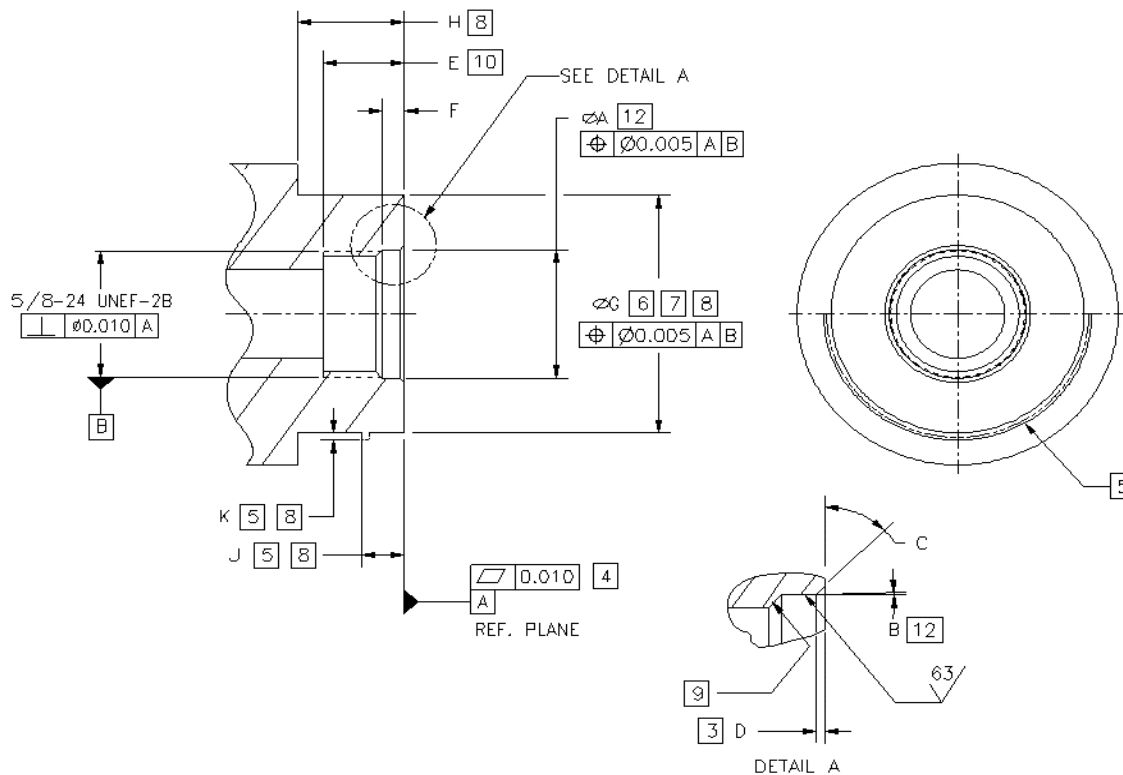


Figure 1 - Physical Dimensions of 5/8-24 RF & AC Equipment Port – Female

DESCRIPTION	DIM	mm		inches		NOTES
		MIN	MAX	MIN	MAX	
O-Ring Gland Internal Diameter	A	16.21	16.38	0.638	0.645	12
O-Ring Gland Angle	B	-	3°	-	3°	12
Chamfer Angle	C	40°	50°	40°	50°	
Chamfer Length	D	0.25	0.64	0.010	0.025	3
Full Thread Depth	E	9.65	-	0.380	-	
O-Ring Gland Depth	F	2.29	2.79	0.090	0.110	
Port External Diameter	G	18.80	41.28	0.740	1.625	6, 7, 8
Port Length	H	12.70	-	0.500	-	8
Shrink Sleeve Ridge Distance From Port End	J		9.53		0.375	5, 8
Shrink Sleeve Ridge Height	K	0.89		0.035		5, 8

NOTES:

- 1 – Drawing not to scale
- 2 – Interpret drawing in accordance with ASME Y14.5M-1994
- 3 – Radius optional
- 4 – After finish applied, this surface to be kept free of paint
- 5 – Shrink sleeve retaining ridge or equivalent feature shall be continuous for 180 degrees min of port perimeter. Alternatively, shrink sleeving may be retained by the radiused corners of a hex incorporated into the open end of the port. Shrink sleeve ridge and/or hex corners shall be a min



height and width of 0.035 in (0.89 mm), located no further than 0.375 in (9.53 mm) from ref. plane. Geometry optional. All exterior corners 0.015R in (0.38R mm) minimum.

- 6 – If cast feature, allowable flash height along parting line (of equipment ports only) to be 0.01 in (0.25 mm) max.
- 7 – External port geometry optional
- 8 – Dimension applies to equipment ports only
- 9 – Reference only: Typical machining practice dictates a 0.030 in (0.76 mm) max chamfer (45°).
- 11 – The 5/8-24 female port and equipment attached to it must accept the male 5/8-24 connector.
- 12 – The O-ring gland internal diameter, dimension A, starts at the reference plane, datum A, with draft (O-ring gland angle, dimension B) to be taken inward (subtracted).

## 8. Mechanical Requirements

Ports *shall* meet the torque requirements as defined in [SCTE 92].