



**Society of Cable
Telecommunications
Engineers**

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 176 2011

**Specification for 75 ohm 'MCX' Connector,
Male & Female Interface**

NOTICE

The Society of Cable Telecommunications Engineers (SCTE) Standards and Recommended Practices (hereafter called documents) are intended to serve the public interest by providing specifications, test methods and procedures that promote uniformity of product, interchangeability, best practices 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 documents. Such adopting party assumes all risks associated with adoption of these documents, 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 document may require the use of subject matter covered by patent rights. By publication of this document, 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 document 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. 2011
140 Philips Road
Exton, PA 19341

TABLE OF CONTENTS

1.0 SCOPE	1
2.0 NORMATIVE REFERENCES.....	1
3.0 INFORMATIVE REFERENCES	2
4.0 COMPLIANCE NOTATION	2
5.0 ELECTRICAL REQUIREMENTS.....	3
6.0 MECHANICAL DIMENSIONS.....	4
7.0 MECHANICAL REQUIREMENTS	10
8.0 ENVIRONMENTAL REQUIREMENTS	10

LIST OF TABLES

TABLE 5-1: ELECTRICAL REQUIREMENTS OF MCX PLUG – SOCKET INTERFACE ONLY.....3

TABLE 6-1: FEMALE SOCKET DIMENSIONS.....4

TABLE 6-2: MALE PLUG DIMENSIONS.....5

TABLE 6-3: CENTER PIN GAUGE.....6

TABLE 6-4: OUTER PLUG GAUGE.....7

TABLE 6-5: TEST PLUG.....8

TABLE 6-6: TEST SOCKET.....9

TABLE 7-1: MECHANICAL REQUIREMENTS OF MCX PLUG – SOCKET INTERFACE...10

TABLE 8-1: ENVIRONMENTAL SPECIFICATIONS.....10

1.0 SCOPE

The purpose of this document is to specify requirements for the male/female interface of a 75ohm, 3GHz rated connector series generically known as MCX. This is an indoor connector with applications in controlled environment headends and hubsites.

All requirements of this document are measured after installation per manufacturer's instructions of the cable into the connector.

This document will address only the interface, not the connector body or the cable requirements. Mechanical, electrical and environmental performance is defined to ensure a reliable connection for permanent installations, as well as temporary adapters and calibration standards.

2.0 NORMATIVE REFERENCES

The following documents contain provisions, which, through reference in this text, constitute provisions of this standard. At the time of subcommittee approval, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

2.1 SCTE References

ANSI/SCTE 04 2007 – Test Method for "F" Connector Return Loss

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

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 103 2004 – Test Method for DC Contact Resistance, Drop cable to F-Connectors and F81 Barrels

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

2.2 Standards from other Organizations

Bellcore GR-1503-CORE 4.8

CECC-22200

EIA-364-65

MIL-STD-202