BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch

FMHR0116-12

Configuration

- Connector 1: M39012/16-0013 (BNC Male)
- Connector 2: M39012/55-3029 (SMA Male)
- Cable: M17/183-00001

Features

- Max Frequency 1 GHz
- 65.9% Phase Velocity
- Polyolefin Jacket
- J-STD-Soldering
- Lot Traceability Data
- Qualified cable and connectors (QPL)
- Acceptance Test Report
- RF Test Data
- In stock and ready to ship

Applications

- General Purpose
- Laboratory Use
- Hi-Reliability
- Unmanned Systems
- Drones
- MIL-DTL-17 Requirements
- Military Electronics

Description

MIL-DTL-17 BNC (M39012/16-0013) to SMA (M39012/55-3029) cable assemblies with test reports from Fairview Microwave are part of our full line of reliable RF components available with same-day shipping. These COTS (commercial-off-the-shelf) cable assemblies using M17/183-00001 have traceable processes and materials that are recorded and provided in the included test report. The MIL-DTL-17 coaxial cable and MIL-PRF-39012 connectors are assembled with J-STD-001 soldering processes and meet WHMA-A-620 workmanship criteria. These carefully selected materials, assembly processes and test sequence ensure a dependable cable assembly for high reliability applications where the cost of failure or replacement is high. Each serialized BNC to SMA MIL-DTL-17 cable assembly is traceable to its component lots and test data ship with every cable.

This MIL-C-17 M39012/16-0013 to M39012/55-3029 cable assembly using M17/183-00001 datasheet PDF contains specifications, CAD drawing and dimensions that are shown below. Fairview Microwave offers these high reliability RF cable assemblies with test data, and many other RF, microwave and millimeter wave components which allow designers to configure and customize their signal systems however they like. Whether the need is to provide reliable MIL-DTL-17 interconnects or supporting test reports, Fairview Microwave has the right cable assemblies for the job. Fairview can also expertly build your custom cable assemblies for you and ship same day.

Referenced Specifications

IPC/WHMA-A-620	Requirements and Acceptance for Cable and Wire Harness Assemblies
MIL-DTL-17	Cables, Radio Frequency, Flexible and Semirigid, General Specification for
MIL-STD-348	Radio Frequency Connector Interfaces for MIL-DTL-3643, MIL-DTL-3650, MIL-DTL-3655, MIL-DTL-25516, MIL-PRF-31031, MIL-PRF-39012, MIL-PRF-49142, MIL-PRF...
MIL-PRF-39012	Connectors, Coaxial, Radio Frequency, General Specification for
IPC J-STD-001	Requirements for Soldered Electrical and Electronic Assemblies
IPC J-STD-006	Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications
SAE AS5942	Marking of Electrical Insulating Materials
SAE AS23053	Insulation Sleeving, Electrical, Heat Shrinkable, General Specifications For
SAE AS22520	Crimping Tools, Wire Termination, General Specification For

BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch

FMHR0116-12

Material Specifications

Component	Specification
Cable	M17/183-00001 in accordance with MIL-DTL-17
Connector 1	M39012/16-0013 in accordance with MIL-PRF-39012
Connector 2	M39012/55-3029 in accordance with MIL-PRF-39012
Heat Shrink 1	M23053/5-106-0 in accordance with SAE AS23053
Heat Shrink 2	M23053/5-106-0 in accordance with SAE AS23053
Solder	SN63 in accordance with J-STD-006

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		1,000	MHz
VSWR			1.4:1	
Velocity of Propagation		65.9		%
Capacitance		32.2 [105.64]		pF/ft [pF/m]
DC Resistance Inner Conductor		0.97 [3.18]		Ω/1000ft [Ω/Km]
Dielectric Withstanding Voltage (AC)			1,000	Vrms

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	50	100	400	1,000		MHz
Insertion Loss (Max.)	0.16	0.19	0.31	0.44		dB

Electrical Specification Notes:
The Insertion Loss data above is based on the performance specifications of the coax cable used in this assembly. The Insertion Loss includes an estimated insertion loss of 0.06*SQRT(GHz) dB maximum for the SMA Male connector and 0.1 dB for the BNC Male connector.

Mechanical Specifications

Cable Assembly

Description	Minimum	Typical	Maximum	Units
Length*	12 [304.8]	12.5 [317.5]	12 [304.8]	in [mm]
Cable Outer Diameter	0.191	0.195	0.199	in
Weight			0.1 [45.36]	lbs [g]

Cable Characteristics

Description	Specification
Cable Type	M17/183-00001

+1 (866) 839-4711 | sales@fairviewmicrowave.com | fairviewmicrowave.com

BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch

FMHR0116-12

Cable Characteristics

Description	Specification
Impedance	50 Ohms
Inner Conductor Type	Stranded
Inner Conductor Material and Plating	Tinned Copper
Dielectric Type	PE
Number of Shields	1
Shield Layer 1	Tinned Copper
Outer Conductor Diameter	0.15 in [3.81 mm]
Jacket Material	Polyolefin

Connector Characteristics

Description	Connector 1	Connector 2
Type	BNC Male	SMA Male
Specification	MIL-PRF-39012	MIL-PRF-39012
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Contact Material and Plating	Brass, Gold	Brass, Gold
Contact Plating Specification	ASTM B488	ASTM B488
Dielectric Type	Teflon	Teflon
Outer Conductor Material and Plating	Brass, Silver	
Outer Conductor Plating Specification	ASTM B700	
Body Material and Plating	Brass, Silver	Steel, Passivated
Body Plating Specification	ASTM B700	QQ-P-35
Coupling Nut Material and Plating		Steel, Passivated
Coupling Nut Plating Specification		QQ-P-35
Seal Gasket Material	Silicone Rubber	Silicone Rubber
Contact Gage Specification	0.210 to 0.230 in	0 in min
Insulator Gage Specification	0.208 to 0.228 in	0 in min

Mechanical Specification Notes:

Environmental Specifications

Description	Specification
Temperature Operating Range	-30 to +85 deg C

+1 (866) 839-4711 | sales@fairviewmicrowave.com | fairviewmicrowave.com

BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch

FMHR0116-12

Compliance Certifications (see product page for current document)

Process Specifications

Process	Specification
Soldering	in accordance with J-STD-001, class 3
Crimping	dies in accordance with SAE AS22520
Marking	shall meet the adherence requirements of SAE AS5942
Workmanship	shall be in accordance with IPC/WHMA-A-620, class 3

Tests and Inspections

Description	Sampling
Connector Gaging (pin and insulator position)	100%
Insertion Loss	100%
VSWR	100%
Dielectric Withstanding Voltage (DWV)	100%
Visual - workmanship, configuration and marking	100%
Length	C=0, 1.5 AQL
Mass	C=0, 1.5 AQL

Plotted and Other Data

Notes:
Values at 25°C, sea level.

BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch

FMHR0116-12

How to Order

Part Number Configuration: **FMHR0116 - xx uu**

- uu — Unit of Measure:
  - cm = Centimeters
  - <blank> = Inches
- xx — Length
- FMHR0116 — Base Number

Example: FMHR0116-12 = 12 inches long cable
FMHR0116-100cm = 100 cm long cable

Cable Assembly Length Tolerances:

Imperial English		Metric	
"L" ≤ 1 ft	+0.5 in / -0 in	"L" ≤ 0.3 m	+12.5 mm / -0 mm
1 ft < "L" ≤ 5 ft	+1 in / -0 in	0.3 m < "L" ≤ 1.5 m	+25 mm / -0 mm
5 ft < "L" ≤ 10 ft	+2 in / -0 in	1.5 m < "L" ≤ 3 m	+50 mm / -0 mm
10 ft < "L" ≤ 25 ft	+3 in / -0 in	3 m < "L" ≤ 7.5 m	+75 mm / -0 mm
25 ft < "L"	+2%"L" / -0%"L"	7.5 m < "L"	+2%"L" / -0%"L"

* Cable Length = "L"

BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch FMHR0116-12

URL: https://www.fairviewmicrowave.com/bnc-male-sma-male-cable-m17-183-00001-coax-fmhr0116-12-p.aspx

FMHR0116-12 CAD Drawing

BNC Male to SMA Male MIL-DTL-17 Cable M17/183-00001 Coax in 12 Inch