Fairview Microwave
an INFINITE brand

# FMHR0090-12
# DATA SHEET

## SMA Male to SMA Male MIL-DTL-17 Cable M17/113-RG316 Coax in 12 Inch

MIL-DTL-17 SMA (M39012/55-3026) to SMA (M39012/55-3026) 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 M17/113-RG316 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 SMA to SMA MIL-DTL-17 cable assembly is traceable to its component lots and test data ship with every cable.

This MIL-C-17 M39012/55-3026 to M39012/55-3026 cable assembly using M17/113-RG316 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.

### Electrical Specifications

| Description | Min | Typ | Max | Units |
|---|---|---|---|---|
| Frequency Range | DC | | 3 | GHz |
| VSWR | | | 1.4:1 | |
| Velocity of Propagation | | 69.5 | | % |
| Capacitance | | 32 [104.99] | | pF/ft [pF/m] |
| DC Resistance Inner Conductor | | 0.84 [2.76] | | Ω/1000ft [Ω/Km] |
| Dielectric Withstanding Voltage (AC) | | | 750 | Vrms |

### Performance by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|---|---|---|---|---|---|---|
| Frequency | 0.05 | 0.1 | 0.4 | 1 | 3 | GHz |
| Insertion Loss (Max.) | 0.11 | 0.15 | 0.29 | 0.5 | 0.79 | 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 per connector.

### Mechanical Specifications

**Cable Assembly**

| | |
|---|---|
| Length* | 12 in [304.8 mm] |

**Cable**

| | |
|---|---|
| Cable Type | M17/113-RG316 |
| Impedance | 50 Ohms |

### Configuration:

- SMA Male
- SMA Male
- M17/113-RG316

### Features:

- Max Frequency 3 GHz
- 69.5% Phase Velocity
- FEP 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:

- Hi-Reliability
- Unmanned Systems
- Drones
- MIL-DTL-17 Requirements
- Military Electronics

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| | |
|---|---|
| Inner Conductor Type | Stranded |
| Inner Conductor Material and Plating | Copper Clad Steel, Silver |
| Dielectric Type | PTFE |
| Number of Shields | 1 |
| Shield Layer 1 | Silver Clad Copper |
| Outer Conductor Diameter | 0.081 in [2.06 mm] |
| Jacket Material | FEP |
| Jacket Diameter | 0.098 in [2.49 mm] |

### Connectors

| Description | Connector 1 | Connector 2 |
|---|---|---|
| Type | SMA Male | SMA Male |
| Specification | MIL-PRF-39012 | MIL-PRF-39012 |
| Impedance | 50 Ohms | 50 Ohms |
| Contact Material & Plating | Brass, Gold | Brass, Gold |
| Contact Plating Spec. | ASTM B488 | ASTM B488 |
| Dielectric Type | Teflon | Teflon |
| Body Material & Plating | Steel, Passivated | Steel, Passivated |
| Body Plating Spec. | QQ-P-35 | QQ-P-35 |
| Coupling Nut Material & Plating | Steel, Passivated | Steel, Passivated |
| Coupling Nut Plating Spec. | QQ-P-35 | QQ-P-35 |
| Seal Gasket Material | Silicone Rubber | Silicone Rubber |

Mechanical Specification Notes:

*All cable assemblies have a length tolerance of 1.5% or ± 3/8", whichever is greater.

## Environmental Specifications

**Temperature**

Operating Range -55 to +165 deg C

## Compliance Certifications (see product page for current document)

## Plotted and Other Data

Notes:

- Values at 25°C, sea level.

## How to Order

Part Number Configuration: **FMHR0090 - xx uu**

- xx = Length
- uu = cm = Centimeters, <blank> = Inches

Example: FMHR0090-12 = 12 inches long cable
FMHR0090-100cm = 100 cm long cable

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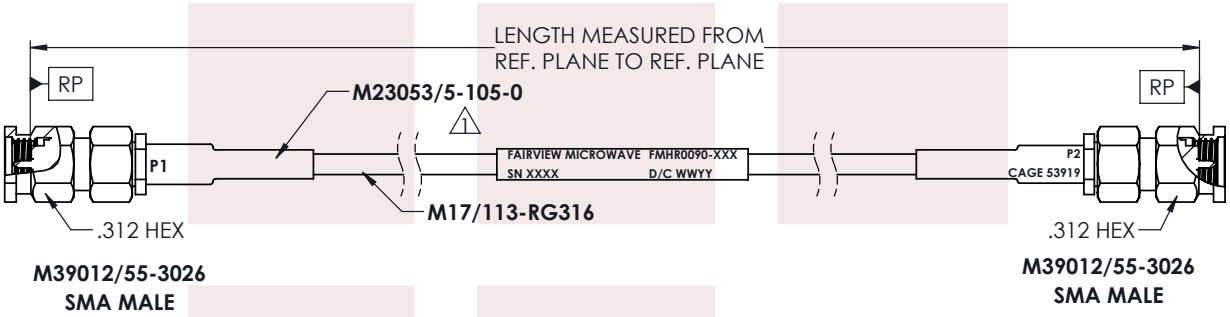
SMA Male to SMA Male MIL-DTL-17 Cable M17/113-RG316 Coax in 12 Inch from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and fiber optic products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: SMA Male to SMA Male MIL-DTL-17 Cable M17/113-RG316 Coax in 12 Inch FMHR0090-12

URL: https://www.fairviewmicrowave.com/sma-male-sma-male-cable-m17-113-rg316-coax-fmhr0090-12-p.aspx




| STANDARD TOLERANCES | |
|---|---|
| .X | ±0.2 |
| .XX | ±0.01 |
| .XXX | ±0.005 |

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

NOTES:
1. BLACK HEAT SHRINK WITH WHITE MARKINGS 3 PLACES.

Fairview Microwave RF COMPONENTS ON DEMAND. Done!

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

TITLE
SMA Male to SMA Male MIL-DTL-17 Cable M17/113-RG316 Coax in 12 Inch

| DWG NO | CAGE CODE | | | | |
|---|---|---|---|---|---|
| FMHR0090 | 3FKR5 | | | | |
| CAD FILE 11/16/18 | SHEET 1 OF 1 | SCALE N/A | SIZE A | CN2379 | |

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