

1.85mm Male to Mini SMP Female Cable FM-SR086TBJ Coax



FMCA100359

Configuration

- Connector 1: 1.85mm Male
- Connector 2: Mini SMP Female
- Cable Type: FM-SR086TBJ
- Coax Flex Type: Formable

Features

- Max Frequency 20 GHz
- Shielding Effectivity > 100 dB
- 69.5% Phase Velocity
- FEP Jacket

Applications

- General Purpose
- Laboratory Use

Description

The 1.85mm male to Mini SMP female cable using FM-SR086TBJ coax, part number FMCA100359, from Fairview Microwave is in-stock and ships same day. This Fairview 1.85mm to Mini SMP cable assembly has a male to female gender configuration with 50 ohm formable FM-SR086TBJ coax. Fairview Microwave's formable RF cable assemblies provide an alternative to costly pre-formed semi-rigid assemblies since they are hand formable. The FMCA100359 1.85mm male to Mini SMP female cable assembly operates to 20 GHz.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other RF cable assembly value added services including connector orientation or clocking, heat shrink booting and labeling are also available. RF testing can also be performed to document the electrical performance of your cable assembly.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		20	GHz
VSWR			1.4:1	
Velocity of Propagation		69.5		%
RF Shielding	100			dB
Group Delay		1.43 [4.69]		ns/ft [ns/m]
Capacitance		29 [95.14]		pF/ft [pF/m]
DC Resistance Inner Conductor		65.7 [215.55]		Ohms/1000ft [Ohms/Km]
DC Resistance Outer Conductor		10.2 [33.46]		Ohms/1000ft [Ohms/Km]

Specifications by Frequency

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Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency	1000	2000	4500	9000	20000	
FMCA100359	Custom Lengths Available	Insertion Loss (Typ.)	0.225	0.306	0.508	0.759	1.2	dB/ft	
			0.74	1.01	1.67	2.5	3.94	dB/m	
FMCA100359-6	6 In	Insertion Loss (Typ.)	0.26	0.31	0.44	0.6	0.88	dB	0.03
FMCA100359-9	9 In	Insertion Loss (Typ.)	0.31	0.39	0.57	0.79	1.18	dB	0.035
FMCA100359-12	12 In	Insertion Loss (Typ.)	0.37	0.47	0.7	0.98	1.48	dB	0.04
FMCA100359-18	18 In	Insertion Loss (Typ.)	0.48	0.62	0.95	1.36	2.08	dB	0.051
FMCA100359-24	24 In	Insertion Loss (Typ.)	0.59	0.77	1.21	1.74	2.68	dB	0.061

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

Loss due to Connector 1: 0.04*SQRT(FGHz) dB
 Loss due to Connector 2: 0.1 dB
 Base Weight: 0.04 pounds
 Additional Weight per Inch: 0.00167 pounds

Mechanical Specifications

Cable Assembly

Width/Diameter: 0.5 in [12.7 mm]
 Weight: 0.04 lbs [18.14 g]

Cable

Cable Type: FM-SR086TBJ
 Impedance: 50 Ohms
 Inner Conductor Type: Solid
 Inner Conductor Material and Plating: Copper Clad Steel, Silver
 Dielectric Type: PTFE
 Number of Shields: 1
 Outer Conductor 1 Material and Plating: Tinned Copper Composite Braid
 Jacket Material: FEP, Black
 Jacket Diameter: 0.105 in [2.67 mm]
 One Time Minimum Bend Radius: 0.5 in [12.7 mm]
 Repeated Minimum Bend Radius: 0.787 in [19.99 mm]

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Connectors

Description	Connector 1	Connector 2
Type	1.85mm Male	Mini SMP Female
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Mating Cycles	500	
Contact Material and Plating	Beryllium Copper, Gold over Nickel	Beryllium Copper, Gold
Contact Plating Specification	50 µin minimum	MIL-G-45204
Dielectric Type	PEI	PTFE
Body Material and Plating	Beryllium Copper, Gold over Nickel	Beryllium Copper, Gold
Body Plating Specification	50 µin minimum	MIL-G-45204
Coupling Nut Material and Plating	Passivated Stainless Steel	
Coupling Nut Plating Specification	ASTM-A582	
Hex Size	5/16 inch	
Torque	8 in-lbs 0.9 Nm	

Environmental Specifications

Operating Range Temperature -55 to +125 deg C

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

Plotted and Other Data

Notes:

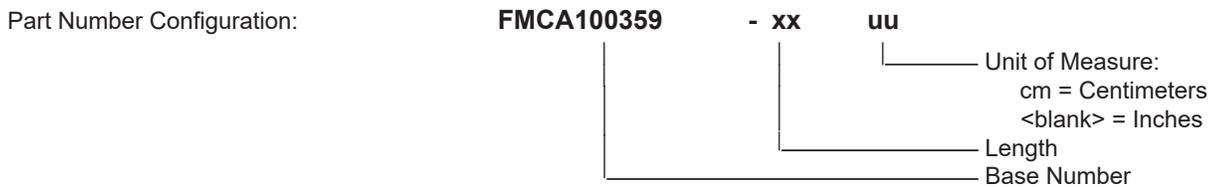
1.85mm Male to Mini SMP Female
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Typical Performance Data

How to Order



Example: FMCA100359-12 = 12 inches long cable
FMCA100359-100cm = 100 cm long cable

1.85mm Male to Mini SMP Female Cable FM-SR086TBJ Coax 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.

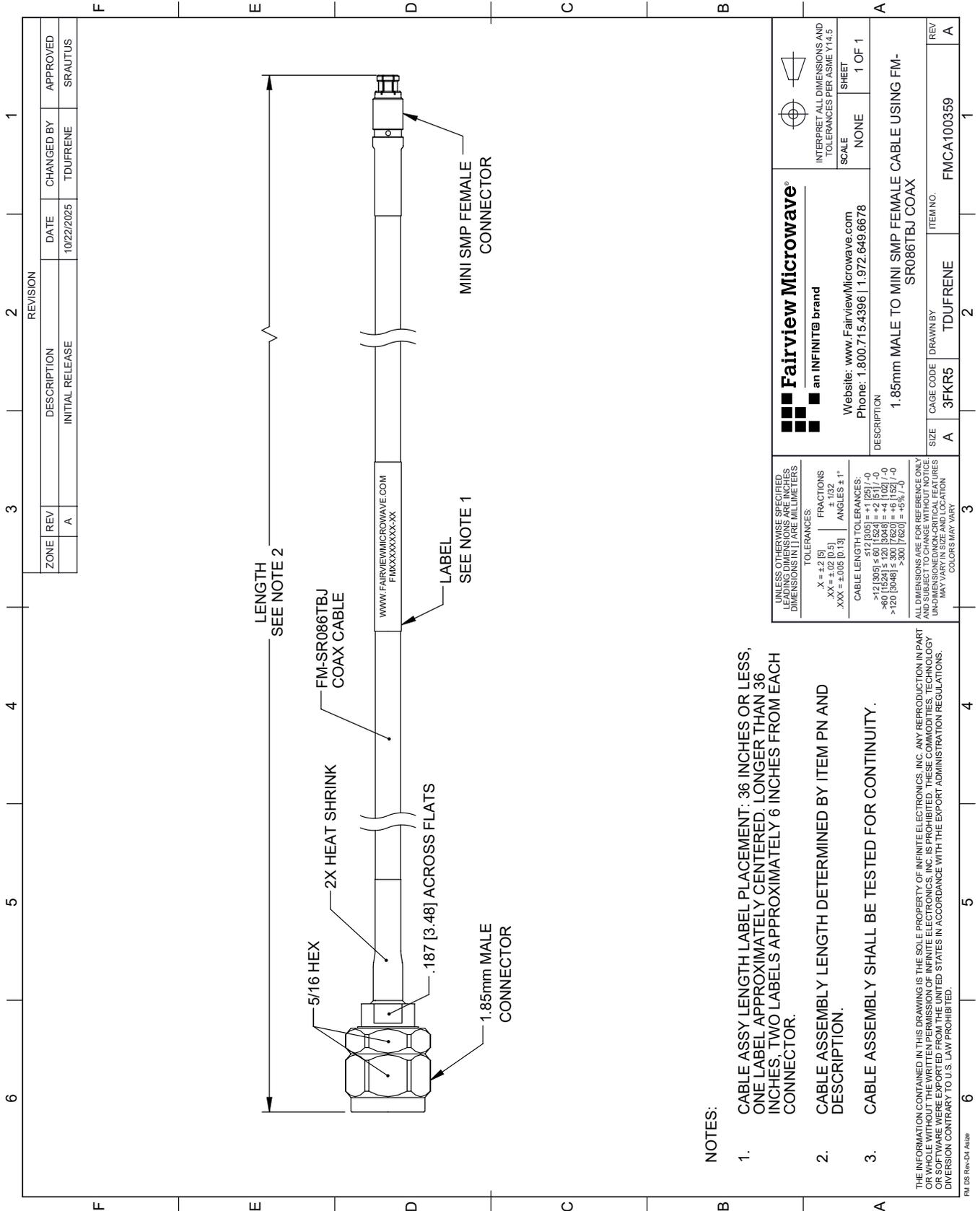
For additional information on this product, please click the following link: [1.85mm Male to Mini SMP Female Cable FM-SR086TBJ Coax FMCA100359](#)

URL: <https://www.fairviewmicrowave.com/1.85mm-male-to-mini-smp-female-cable-fm-sr086tbj-coax-fmca100359-p.aspx>

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FMCA100359 CAD Drawing

1.85mm Male to Mini SMP Female Cable FM-SR086TBJ Coax



REVISION		DATE	CHANGED BY	APPROVED	
ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	10/22/2025	TDUFRENE	SRAUTUS

Fairview Microwave®
an INFINIT® brand

Website: www.FairviewMicrowave.com
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE MILLIMETERS.

TOLERANCES:
 .X = ±.2 [5] FRACTIONS ±.132
 .XX = ±.02 [0.5] ANGLES ± 1°
 .XXX = ±.005 [0.13]

CABLE LENGTH TOLERANCES:
 >12 [305] ≤ 60 [1524] = ±.1 [25] / -0
 >60 [1524] ≤ 120 [3048] = ±.4 [102] / -0
 >120 [3048] ≤ 300 [7620] = ±.8 [20] / -0
 >300 [7620] = ±.9 [23] / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE MILLIMETERS. COLORS MAY VARY.

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE: NONE
SHEET: 1 OF 1

DESCRIPTION: 1.85mm MALE TO MINI SMP FEMALE CABLE USING FM-SR086TBJ COAX

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	TDUFRENE	FMCA100359

NOTES:

- CABLE ASSY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED, LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
- CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.
- CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.

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