

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



FMCA100351

Configuration

- Connector 1: 1.85mm Male
- Connector 2: Mini SMP Female Right Angle
- 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 RA Mini SMP female cable using FM-SR086TBJ coax, part number FMCA100351, 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 FMCA100351 1.85mm male to Mini SMP female cable assembly operates to 20 GHz. The right angle Mini SMP interface on the FM-SR086TBJ cable allows for easier connections in tight spaces.

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]
Operating Voltage (AC)			325	Vrms

Specifications by Frequency

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



FMCA100351

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency	1000	2000	4500	9000	20000	
FMCA100351	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	
FMCA100351-6	6 In	Insertion Loss (Typ.)	0.21	0.29	0.45	0.65	1.01	dB	0.03
FMCA100351-9	9 In	Insertion Loss (Typ.)	0.26	0.36	0.58	0.84	1.31	dB	0.035
FMCA100351-12	12 In	Insertion Loss (Typ.)	0.32	0.44	0.7	1.03	1.61	dB	0.04
FMCA100351-18	18 In	Insertion Loss (Typ.)	0.43	0.59	0.96	1.41	2.21	dB	0.051
FMCA100351-24	24 In	Insertion Loss (Typ.)	0.54	0.74	1.21	1.79	2.81	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: 0.05*SQRT(FGHz) 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]

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



FMCA100351

Connectors

Description	Connector 1	Connector 2
Type	1.85mm Male	Mini SMP Female Right Angle
Specification		MIL-STD-348A
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Right Angle
Mating Cycles	500	
Contact Material and Plating	Beryllium Copper, Gold over Nickel	Beryllium Copper, Gold
Contact Plating Specification	50 µin minimum	
Dielectric Type	PEI	PTFE
Outer Conductor Material and Plating		Beryllium Copper, Gold
Body Material and Plating	Beryllium Copper, Gold over Nickel	Brass, Gold
Body Plating Specification	50 µin minimum	
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 RA Mini SMP Female
Cable FM-SR086TBJ Coax



FMCA100351

Typical Performance Data

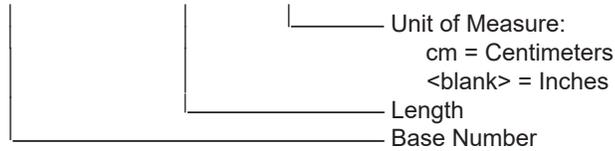
How to Order

Part Number Configuration:

FMCA100351

- xx

uu



Example: FMCA100351-12 = 12 inches long cable
FMCA100351-100cm = 100 cm long cable

1.85mm Male to RA 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.

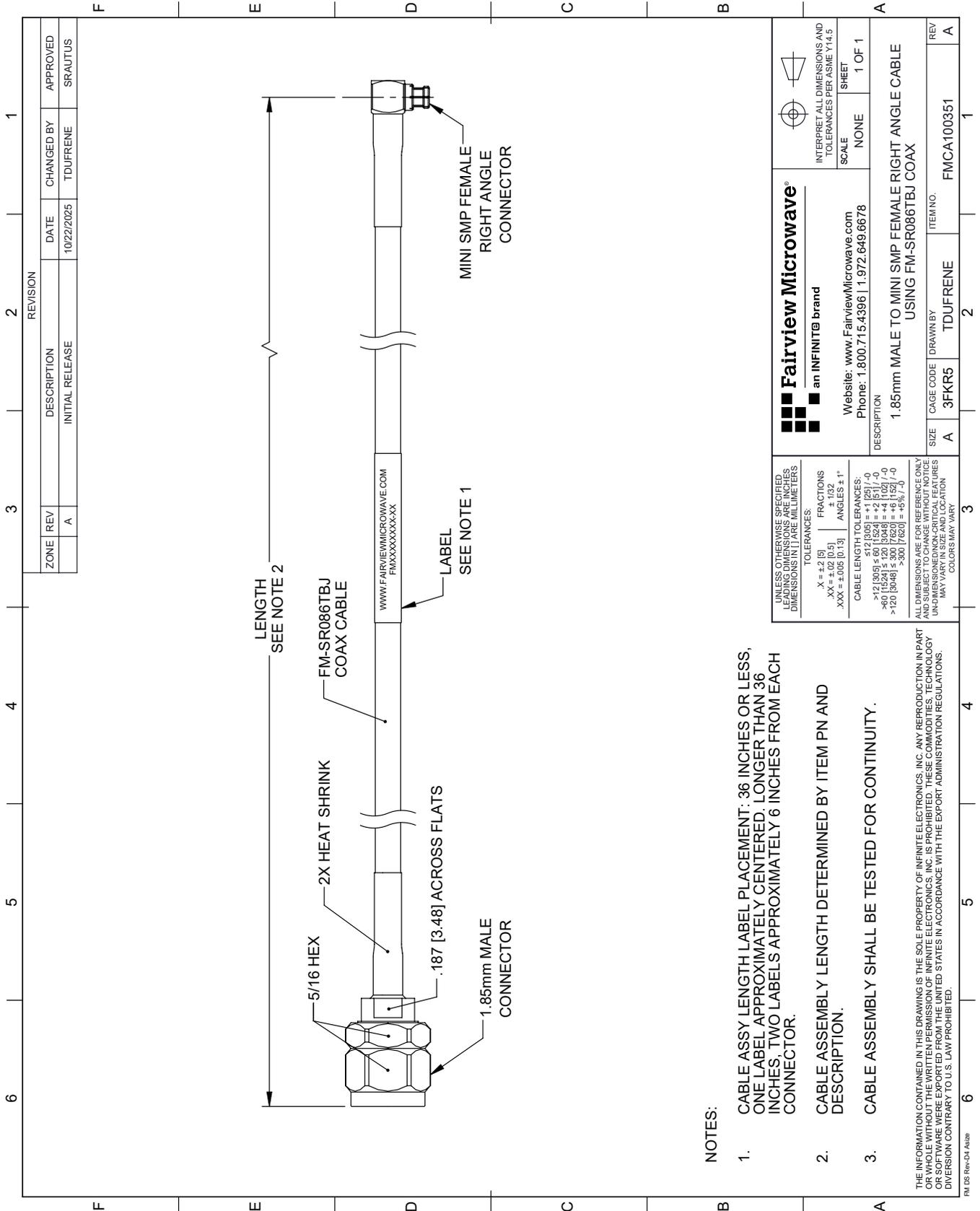
For additional information on this product, please click the following link: [1.85mm Male to RA Mini SMP Female Cable FM-SR086TBJ Coax FMCA100351](https://www.fairviewmicrowave.com/1.85mm-male-to-ra-mini-smp-female-cable-fm-sr086tbj-coax-fmca100351)

URL: <https://www.fairviewmicrowave.com/1.85mm-male-to-ra-mini-smp-female-cable-fm-sr086tbj-coax-fmca100351-p.aspx>

The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume liability arising out of the use of any part or document.

FMCA100351 CAD Drawing

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



NOTES:

1. 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.
2. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.
3. CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVISION CONTRARY TO U.S. LAW PROHIBITED.

FM DS Rev-D4 A426

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

Fairview Microwave an INFINIT® brand		Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678	INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE: NONE SHEET: 1 OF 1
UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE MILLIMETERS.		TOLERANCES: .X = ±.2 [5] .XX = ±.02 [0.5] .XXX = ±.005 [0.13]	FRACTIONS: ±.1/32 ANGLES: ±1°
CABLE LENGTH TOLERANCES: >12 [305] ≤ 60 [1524] = ±.1 [25] / -0 >60 [1524] ≤ 120 [3048] = ±.4 [102] / -0 >120 [3048] ≤ 300 [7620] = ±.1 [25] / -0 >300 [7620] = ±.5 [12.7] / -0		ALL DIMENSIONS ARE FOR REFERENCE ONLY. DIMENSIONS OF NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.	
DESCRIPTION	SIZE	CAGE CODE	ITEM NO.
1.85mm MALE TO MINI SMP FEMALE RIGHT ANGLE CABLE USING FM-SR086TBJ COAX	A	3FKR5	FMCA100351