



FLEXIBLE

Coaxial Cable

FL086-6SM+

50Ω 6 inch DC to 18 GHz SMA-Male

THE BIG DEAL

- Wideband frequency coverage, DC to 18 GHz
- Low Loss, 0.57 dB typ. at 18 GHz
- Excellent Return Loss, 23 dB at 18 GHz
- 6mm bend radius for tight installations
- Insulated outer jacket standard
- Connector interface, meets MIL-STD-348
- Ideal for interconnect of assembled systems



Generic photo used for illustration purposes only

Model No.	FL086-6SM+
Case Style	SE2634-6
Connectors	SMA-Male

APPLICATIONS

- Replacement for custom bent 0.086" semi-rigid cables
- Communication Receivers and Transmitters
- Military and Aerospace Systems
- Environmental and Test Chambers
- Test Accessory

+RoHS Compliant

The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications.

PRODUCT OVERVIEW

The FL086 Series Flexible Coaxial Cables are ideal for interconnection of coaxial components or sub-systems. The construction includes a silver-plated copper-clad steel center conductor. The outer shield is copper braid, silver plated, which minimizes signal leakage and at the same time flexible for easy bend. Dielectric is low loss PTFE. Connectors have brass coupling nut over nickel plated body with a gold plated brass center conductor. The FL086 Series Flexible cables are available in variety of length to meet your requirements.

KEY FEATURES

Feature	Advantages
Flexible RF Cables	The FL086 Series Flexible cables are ideal for use integrating coaxial components and sub-assemblies without the need for special cable-bending tools and alleviating the risk of damage during the bending process typical of semi-rigid coaxial cable assemblies.
Tight Bend Radius	Capable of only 6mm bend radius, the FL086 Flexible series is able to make connections in tight spaces making these cables ideal for dense system integration
Excellent Return Loss	The FL086 Series Flexible Cables are ideally suited for interconnecting a wide variety of RF components while minimizing VSWR ripple contribution due to mating cables & connectors.
Good Power Handling Capability	Mini-Circuits FL086 Cable series can support medium to high RF power levels enabling these cables to be used in the transmit path. NOTE: power rating is at sea-level altitudes.

REV. C
ECO-026545
FL086-6SM+
MCL NY
250814





FLEXIBLE

Coaxial Cable

FL086-6SM+

50Ω 6 inch DC to 18 GHz SMA-Male

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC	—	18	GHz
Length ¹			6		inches
Insertion Loss	DC - 2	—	0.1	0.4	dB
	2 - 6	—	0.2	0.6	
	6 - 10	—	0.3	0.8	
	10 - 18	—	0.4	1.0	
Return Loss	DC - 2	23	40	—	dB
	2 - 6	23	37	—	
	6 - 10	18	34	—	
	10 - 18	18	33	—	

1. Custom sizes available, consult factory.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55°C to +105°C
Storage Temperature	-55°C to +105°C
Power Handling at 25°C, Sea Level	198W at 0.5 GHz 140W at 1 GHz 99W at 2 GHz 57W at 6 GHz 45W at 10 GHz 33W at 18 GHz

Permanent damage may occur if any of these limits are exceeded.



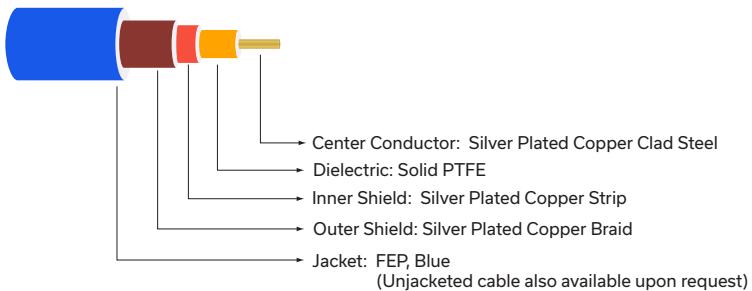
FLEXIBLE

Coaxial Cable

FL086-6SM+

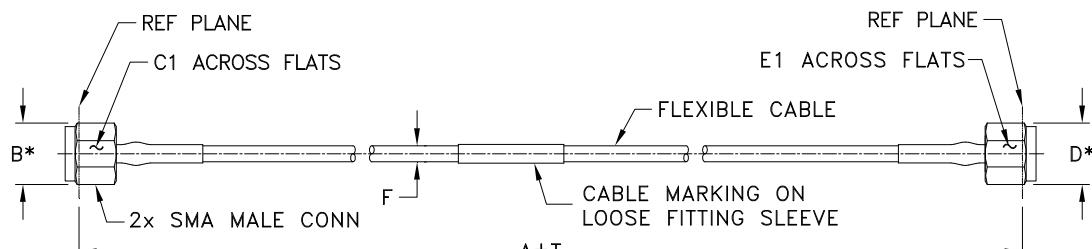
50Ω 6 inch DC to 18 GHz SMA-Male

CABLE CONSTRUCTION



Connectors:
 Coupling Nut: Stainless Steel Passivated
 Body: Stainless Steel Gold Plated
 Center Pin: Brass, Gold Plated

OUTLINE DRAWING



* OVERALL CONNECTOR DIMENSION
 (CONNECTOR SHAPE MAY VARY)

OUTLINE DIMENSIONS (Inch mm)

A	B	C1	C2	D	E1	E2	T	wt
6.0 152.40	.36 9.14	.315 8.00	--	.36 9.14	.315 8.00	--	0.05 1.27	grams 8.11



FLEXIBLE

Coaxial Cable

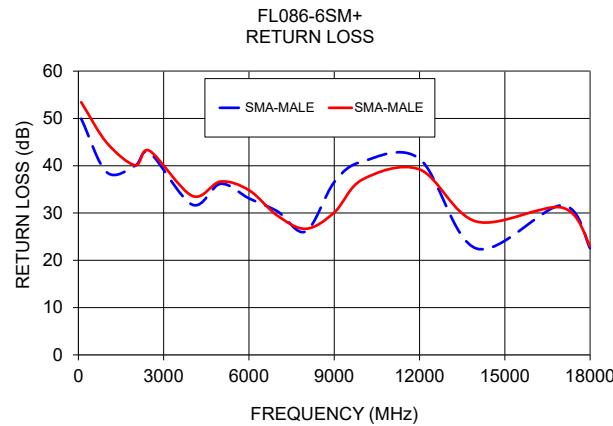
FL086-6SM+

50Ω 6 inch DC to 18 GHz SMA-Male

Mini-Circuits

TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		SMA-Male	SMA-Male
100	0.03	49.93	53.42
1000	0.11	38.61	44.85
2000	0.14	40.00	40.09
2500	0.17	42.81	43.16
4000	0.22	31.78	33.63
5000	0.24	36.17	36.65
6000	0.29	33.10	34.83
7000	0.30	30.36	29.44
8000	0.33	26.11	26.67
9000	0.33	36.52	30.11
10000	0.36	40.91	37.11
12000	0.41	41.45	39.21
14000	0.46	22.49	28.19
17000	0.48	31.62	31.16
18000	0.57	22.55	22.97



NOTES

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

PAGE 4 OF 4