HAND FLEX™

Coaxial Cable

086-XXSMPR+ Series

50Ω DC to 18 GHz

CASE STYLE: KP2131-XX

The Big Deal

- Hand-formable
- Right-angle SMP-F blind mate snap-on connectors
- Excellent return loss
- Low insertion loss
- Ideal for connections in crowded system layouts

Product Overview

086-SMPR+ Series Hand-Flex interconnect cables are ideal for interconnecting coaxial components and sub-assemblies in a wide range of systems. Rugged, hand-formable cable construction provides a minimum bend radius of 6mm to accommodate tight layouts without the need for bending tools, adapters or brackets. Right-angle SMP-F blind mate snap-on connectors make these cables ideal for connections between adjacent modules in crowded system layouts. The connector interface meets MIL-STD-348 requirements and an insulated outer jacket protects against wear and tear. 086-SMPR+ cables are available in a variety of lengths to meet your requirements.

Key Features

Feature	Advantages
Hand-formable RF cables	Facilitates interconnection of assembled systems without the need for special cable-bending tools or adapters. Reduces the risk of damage during bending.
Tight bend-radius	6mm bend-radius allows almost any custom shape, accommodating tight layouts.
Right-angle SMP-F blind mate snap-on connectors	Ideal for interconnect of adjacent modules with tight space constraints without sacrificing high-frequency performance due to severe bend near the connector interface.
Excellent return loss	Minimizes VSWR ripple contribution due to mating cables and connectors.
Low insertion loss	Minimizes overall signal path loss.
Good power handling • 87W at 0.5 GHz • 15W at 18 GHz	Supports medium to high RF power levels used in transmit paths.

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/MCLStore/terms.jsp

HAND FLEX™

Coaxial Cable

086-5SMPR+

50Ω 5 inch DC to 18 GHz

CASE STYLE: KP2131-5

Connectors	Model
Right Angle SMP-F (Snap-on)	086-5SMPR+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-55°C to 105°C		
Storage Temperature	-55°C to 105°C		
Power Handling at 25°C, Sea Level	87W	at	0.5 GHz
	85W	at	1 GHz
	81W	at	2 GHz
	65W	at	6 GHz
	48W	at	10 GHz
	15W	at	18 GHz

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

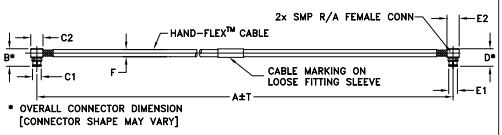
Features

- Wideband frequency coverage, DC to 18 GHz
- Low Loss, 0.45 dB at 18 GHz
- Excellent Return Loss, 29 dB at 18 GHz
- Hand formable to almost any custom shape without special bending tools
- 6mm bend radius for tight installations
- Insulated outer jacket standard
- Connector interface, meets MIL-STD-348
- **Ideal for interconnect of assembled systems**

Applications

- Communication receivers and transmitters
- Military and aerospace system
- Environmental and test chambers

Outline Drawing

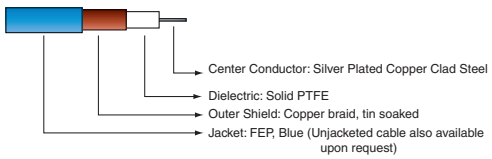


Outline Dimensions (inch / mm)

A	B	C1	C2	D
5.0	.27	.135	.19	.27
127.00	6.86	3.43	4.83	6.86

E1	E2	F	T		wt
.135	.19	.108 NOM	INCH	MM	grams
3.43	4.8	2.74 NOM	0.5	1.27	3.29

Cable Construction



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

Electrical Specifications at 25°C

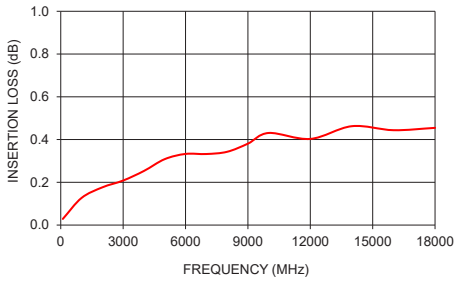
Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		18	GHz
Length[1]			5		inches
Insertion Loss	DC - 2	—	0.12	0.4	dB
	2 - 6	—	0.25	0.7	
	6 - 10	—	0.36	0.9	
	10 - 18	—	0.43	1.2	
Return Loss	DC - 2	20.3	40	—	dB
	2 - 6	20.3	29	—	
	6 - 10	16	26	—	
	10 - 18	16	23	—	

1. Custom sizes available, consult factory.

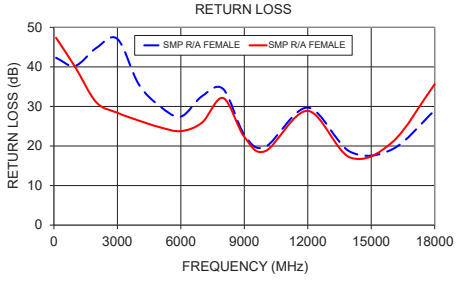
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		Right Angle SMP - Female	Right Angle SMP - Female
100	0.03	42.31	47.36
1000	0.13	40.25	40.00
2000	0.18	44.77	31.07
3000	0.21	47.07	28.39
4000	0.25	35.70	26.45
5000	0.31	30.10	24.75
6000	0.33	27.45	23.76
7000	0.33	32.60	25.91
8000	0.34	34.42	32.12
9000	0.38	22.86	22.31
10000	0.43	19.82	18.72
12000	0.40	29.70	28.88
14000	0.46	18.55	17.09
16000	0.44	19.18	20.99
18000	0.45	29.00	35.63

086-5SMPR+
INSERTION LOSS



086-5SMPR+
RETURN LOSS



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