



HAND FLEX™

Coaxial Cable

086-10SMP+

Mini-Circuits

50Ω 10 inch DC to 18 GHz SMP-Female (Snap-on)

THE BIG DEAL

- Wideband frequency coverage, DC to 18 GHz
- Low Loss, 1.1 dB typ. up to 18 GHz
- Excellent Return Loss, 28 dB typ. up to 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



Generic photo used for illustration purposes only

| | |
|------------|----------------------|
| Model No. | 086-10SMP+ |
| Case Style | KP2093-10 |
| Connectors | SMP-Female (Snap-on) |

+RoHS Compliant

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

APPLICATIONS

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

PRODUCT OVERVIEW

086-SMP+ 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. The connector interface meets MIL-STD-348 requirements and an insulated outer jacket protects against wear and tear. 086-SMP+ 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 adapt-ers. Reduces the risk of damage during bending. |
| Tight bend-radius | 6 mm 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 <ul style="list-style-type: none"> • 87W at 0.5 GHz • 15W at 18 GHz | Supports medium to high RF power levels used in transmit paths. |





ELECTRICAL SPECIFICATIONS AT +25°C

| Parameter | Frequency (GHz) | Min. | Typ. | Max. | Units |
|---------------------|-----------------|------|------|------|--------|
| Frequency Range | | DC | | 18 | GHz |
| Length ¹ | | | 10 | | inches |
| Insertion Loss | DC - 2 | — | 0.24 | 0.5 | dB |
| | 2 - 6 | — | 0.57 | 0.9 | |
| | 6 - 10 | — | 0.82 | 1.2 | |
| | 10 - 18 | — | 1.05 | 1.7 | |
| Return Loss | DC - 2 | 20 | 39 | — | dB |
| | 2 - 6 | 20 | 32 | — | |
| | 6 - 10 | 17 | 31 | — | |
| | 10 - 18 | 17 | 28 | — | |

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 | 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.



HAND FLEX™

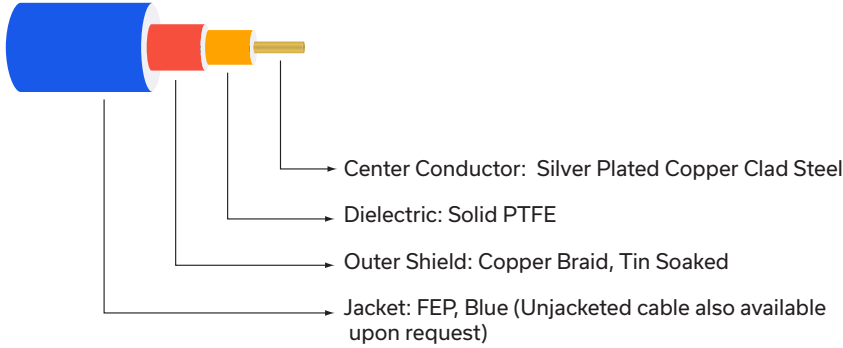
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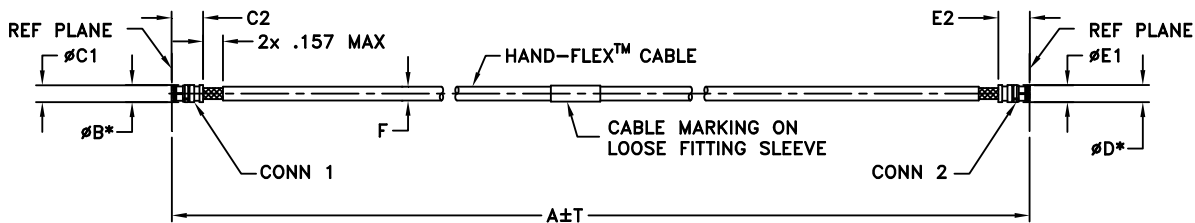
50Ω 10 inch DC to 18 GHz SMP-Female (Snap-on)

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 | F | T | wt grams |
|--------|------|------|------|------|------|------|------|------|-------------|
| 10.0 | .14 | .135 | .252 | .14 | .135 | .252 | .108 | 0.1 | 5.07 |
| 254.00 | 3.56 | 3.43 | 6.40 | 3.56 | 3.43 | 6.40 | 2.75 | 2.54 | |





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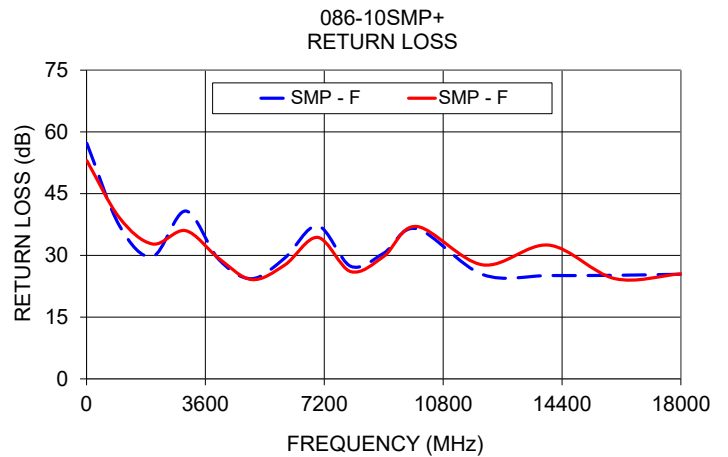
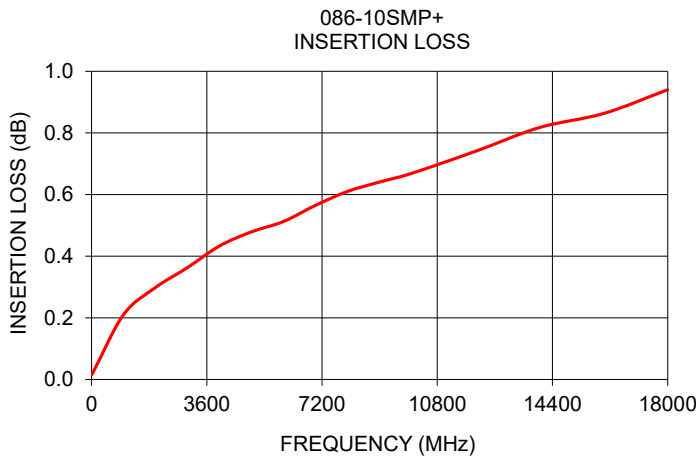
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TYPICAL PERFORMANCE DATA AND CHARTS

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) | |
|-----------------|---------------------|------------------|--------------|
| | | SMP - Female | SMP - Female |
| 10 | 0.02 | 57.20 | 52.99 |
| 1000 | 0.21 | 37.17 | 39.10 |
| 2000 | 0.30 | 29.73 | 32.76 |
| 3000 | 0.36 | 40.78 | 36.00 |
| 4000 | 0.43 | 29.05 | 29.31 |
| 5000 | 0.48 | 24.33 | 24.13 |
| 6000 | 0.51 | 29.35 | 27.64 |
| 7000 | 0.57 | 37.20 | 34.37 |
| 8000 | 0.61 | 27.36 | 26.06 |
| 9000 | 0.64 | 30.54 | 29.74 |
| 10000 | 0.67 | 36.47 | 37.02 |
| 12000 | 0.74 | 25.33 | 27.70 |
| 14000 | 0.82 | 25.10 | 32.49 |
| 16000 | 0.86 | 25.16 | 24.35 |
| 18000 | 0.94 | 25.42 | 25.51 |



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

