



# Coaxial Cable

## 086-18BM+

Mini-Circuits

50Ω 18 inch DC to 3 GHz BNC-Male

### THE BIG DEAL

- Wideband frequency coverage, DC to 3 GHz
- Low Loss, 0.6 dB at 3 GHz
- Excellent Return Loss, 37 dB at 3 GHz
- Hand formable to almost any custom shape without special bending tools
- 6mm bend radius for tight installations
- Insulated outer jacket standard<sup>1</sup>
- Connector interface, meets MIL-STD-348
- Ideal for interconnect of assembled systems



Generic photo used for illustration purposes only

|                   |           |
|-------------------|-----------|
| <b>Model No.</b>  | 086-18BM+ |
| <b>Case Style</b> | KP2467-18 |
| <b>Connectors</b> | BNC-Male  |

### +RoHS Compliant

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

### APPLICATIONS

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

### PRODUCT OVERVIEW

The 086-BM+ Series Hand-Flex™ Coaxial Cables are ideal for interconnecting coaxial components and sub-assemblies in a wide range of systems, including communications, military and aerospace, environmental test chambers and more. The hand-formable cable provides a minimum bend radius of 6mm to accommodate tight layouts without the need for bending tools, adapters or brackets. BNC-male connectors make these cables ideal for connection of assemblies with BNC connector types. 086-BM+ series cables are available in a variety of lengths to meet your system needs.

### KEY FEATURES

| Feature   | Advantages   |
|---|--|
| Hand-Flex™ (Hand-formable RF cables)  | Facilitates the assembly of coaxial systems and sub-systems without the need for special cable bending tools or adapters. Reduces the risk of damage during bending. |
| Tight bend-radius, 6mm  | 6mm bend-radius makes the cable ideal for connections in tight spaces and crowded layouts.   |
| Low Insertion Loss  | Minimizes overall signal path loss.  |
| Excellent Return Loss   | Minimizes signal reflection and VSWR ripple contribution   |
| BNC-Male Connectors   | Supports easy interconnection of components and equipment in systems with BNC connector types.   |
| Good Power Handling Capability: <ul style="list-style-type: none"> <li>• 211W at 0.5 GHz</li> <li>• 80W at 3 GHz</li> </ul> | Supports medium to high RF power levels used in transmit paths. For higher power handling, refer to our 141-XXBM+ series cables.                                     |

1. Unjacketed cable also available upon request.





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## ELECTRICAL SPECIFICATIONS AT 25°C

| Parameter           | Frequency (GHz) | Min. | Typ. | Max. | Units  |
|---------------------|-----------------|------|------|------|--------|
| Frequency Range     |                 | DC   |      | 3    | GHz    |
| Length <sup>2</sup> |                 | 18   |      |      | inches |
| Insertion Loss      | DC - 3          | —    | 0.39 | 0.9  | dB     |
| Return Loss         | DC - 3          | 19   | 35   | —    | dB     |

2. 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 | 211W at 0.5 GHz<br>150W at 1 GHz<br>101W at 2 GHz<br>80W at 3 GHz |

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





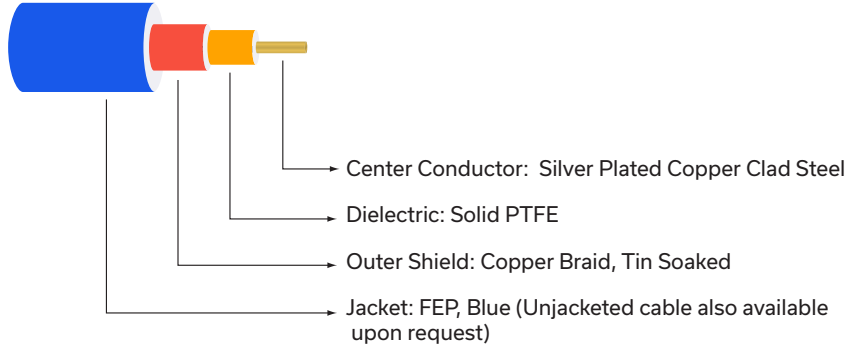
# Coaxial Cable

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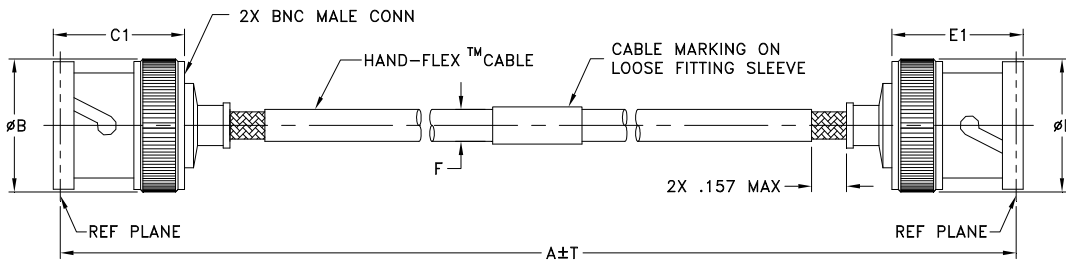
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### CABLE CONSTRUCTION



Connectors: Body & Coupling Nut: Brass, Nickel Plated  
Center Pin: Brass, Gold Plated

### OUTLINE DRAWING



### OUTLINE DIMENSIONS (Inch/mm)

| A      | B    | C1    | C2 | D    | E1    | E2 | F    | T    | wt    |
|--------|------|-------|----|------|-------|----|------|------|-------|
| 18.0   | .57  | .59   | -- | .57  | .59   | -- | .108 | 0.15 | grams |
| 457.20 | 14.5 | 14.99 | -- | 14.5 | 14.99 | -- | 2.75 | 3.81 | 28.63 |





HAND FLEX™

# Coaxial Cable

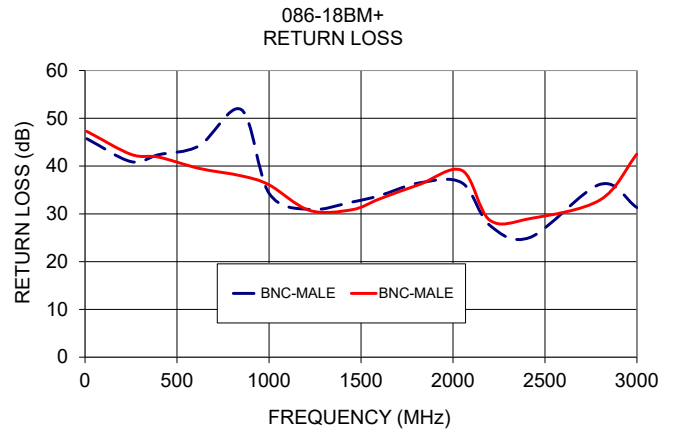
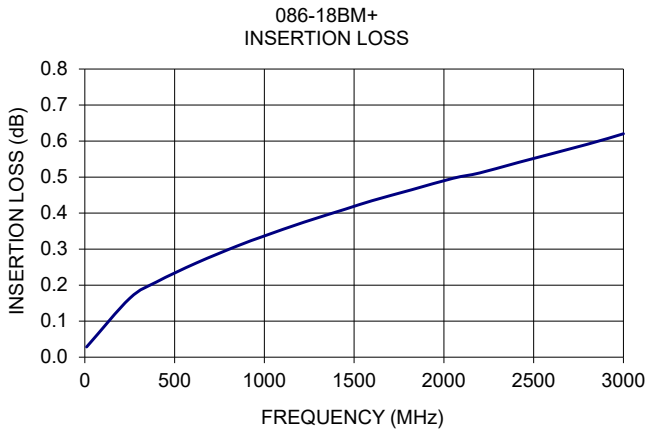
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## TYPICAL PERFORMANCE DATA AND CHARTS

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) |          |
|-----------------|---------------------|------------------|----------|
|                 |                     | BNC-Male         | BNC-Male |
| 10              | 0.03                | 45.7             | 47.3     |
| 250             | 0.16                | 40.9             | 42.5     |
| 400             | 0.21                | 42.4             | 41.9     |
| 620             | 0.26                | 44.2             | 39.5     |
| 850             | 0.31                | 51.8             | 37.9     |
| 1000            | 0.34                | 34.3             | 36.1     |
| 1220            | 0.37                | 30.9             | 30.7     |
| 1450            | 0.41                | 32.5             | 30.9     |
| 1600            | 0.43                | 33.8             | 33.1     |
| 1820            | 0.46                | 36.5             | 36.2     |
| 2050            | 0.50                | 36.5             | 39.1     |
| 2200            | 0.51                | 27.6             | 28.7     |
| 2420            | 0.54                | 25.1             | 29.0     |
| 2800            | 0.59                | 36.2             | 32.9     |
| 3000            | 0.62                | 31.3             | 42.5     |



- 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](http://www.minicircuits.com/terms/viewterm.html)



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