

#### DC to 3 GHz 50Ω

# 141-BM+ Series

### The Big Deal

- Hand-formable to any shape, 8mm min bend radius
- BNC-Male connectors
- Excellent return loss
- Low insertion loss
- Ideal for interconnect of assembled systems

### **Product Overview**

CASE STYLE: KQ2160

141-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 8mm 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. 141-BM+ series cables are available in a variety of lengths to meet your system needs.

| Feature  | Advantages   |  |
|--|--|--|
| Hand-formable RF cables                                      | Facilitates the assembly of coaxial systems and sub-systems without the need for special cable-<br>bending tools or adapters. Reduces the risk of damage during bending. |  |
| Tight bend-radius, 8mm                                       | 8mm 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<br>• 546 W at 0.5 GHz<br>• 180W at 3 GHz | Supports medium to high RF power levels used in transmit paths.  |  |

### **Key Features**

Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



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



#### 24 inch DC to 3 GHz **50**Ω

#### **Maximum Ratings**

| Operating Temperature   | - J-            |  |  |  |
|-------------------------|-----------------|--|--|--|
| Storage Temperature     | -55°C to 105°C  |  |  |  |
| Power Handling at 25°C, | 546W at 0.5 GHz |  |  |  |
| Sea Level               | 387W at 1 GHz   |  |  |  |
|                         | 273W at 2 GHz   |  |  |  |
|                         | 180W at 3 GHz   |  |  |  |
|                         |                 |  |  |  |

Permanent damage may occur if any of these limits are exceeded

#### Features

- Wideband frequency coverage, DC-3GHz
- Low Loss, 0.46 dB at 3 GHz
- Excellent Return Loss, 31 dB at 3 GHz · Hand formable to almost any custom shape without special bending tools
- · 8mm bend radius for tight installations
- Insulated outer jacket standard<sup>1</sup>
- · Ideal for interconnect of assembled systems

#### **Applications**

- Replacement for custom bent 0.141" semi-rigid cables
- Communication receivers and transmitters
- · Military and aerospace system
- · Environmental and test chambers





#### CASE STYLE: KQ2160-24

| Connectors |          | Model     |
|------------|----------|-----------|
| Conn1      | Conn2    |           |
| BNC-Male   | BNC-Male | 141-24BM+ |

#### +RoHS Compliant

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

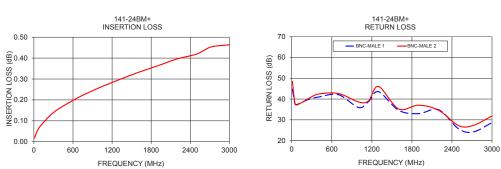
#### Electrical Specifications at 25°C

| Parameter           | Condition (GHz) | Min. | Тур. | Max. | Unit   |
|---------------------|-----------------|------|------|------|--------|
| Frequency Range     |                 | DC   |      | 3    | GHz    |
| Length <sup>2</sup> |                 | 24   |      |      | inches |
| Insertion Loss      | DC - 3          | —    | 0.31 | 0.75 | dB     |
| Return Loss         | DC - 3          | 19   | 37   | —    | dB     |

1. Unjacketed cable also available upon request.

2. Custom sizes available, consult factory.

#### **Typical Performance Data** Frequency Insertion Loss **Return Loss** (MHz) (dB) (dB) BNC-Male **BNC-Male** 44.75 10 0.02 48.44 50 0.05 37.71 37.56 100 0.08 37.67 37 46 250 0.13 39 78 40.19 400 0.16 40.97 42.41 700 0.21 42.08 42.65 35.94 1000 0.26 38.59 1150 0.28 38.78 39.10 1300 0.30 43.53 46.06 1600 0.33 34.63 35 25 1900 32 97 37 06 0.36 2200 34.87 0.40 34.60 2500 0.42 25.66 27.23 2720 0.45 24.21 27.33 3000 0.46 28 66 31.87



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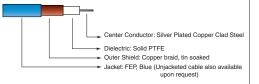
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|            | Outline Drawing   |            |
|------------|---|------------|
|            | Image: State Conn         CABLE MARKING ON           Image: State Connection         Loose futting sleeve           Image: State Connection         Image: State Connection           Image: State Connec |            |
| -REF PLANE |   | REF PLANE- |

### Outline Dimensions (inch)

| • • • • • |      |           |       |        |
|-----------|------|-----------|-------|--------|
| D         | C2   | C1        | в     | Α      |
| .57       | -    | .59       | .57   | 24.0   |
| 14.48     | -    | 14.99     | 14.48 | 609.60 |
| wt        | т    | F         | E2    | E1     |
| grams     | .15  | .163±.004 | -     | .59    |
| 47.83     | 3.81 | 4.14±0.10 | -     | 14.99  |
|           |      |           |       |        |

### **Cable Construction**



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

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