M-FLEX® FLEXIBLE CABLE

**M-FLEX** from Micro-Coax offers an excellent choice for Microwave signal transmission. Employing our high-frequency microwave cable technology, Micro-Coax has designed **M-FLEX** from “the GHz down” rather than “the MHz up”.

This precision approach results in unsurpassed improvements in shielding, stability, durability and lower cost compared to similar products. **M-FLEX** is constructed from an improved solid PTFE dielectric core underneath a precision wound layer of metalized tape for nearly ideal microwave shielding. Strength and protection are then added via a round wire braid and FEP outer jacket. The result is a cable with true microwave performance and excellent mechanical characteristics. **M-FLEX** is also easy to use since it strips with standard tools and accepts standard solder-on connectors.

**M-FLEX FEATURES AND BENEFITS**

**HIGH PERFORMANCE**
- Helical shield for improved loss and phase stability
- Same line size as semi-rigid to optimize assembly loss and VSWR
- Isolation greater than 90 dB to minimize cross talk and maximize system performance

**EASY TO USE**
- Fully flexible for ease of installation
- Uses standard machines for cutting and stripping, no added investment in time or equipment
- Designed for standard solder-on connectors, which are readily available and easy to use

**AVAILABILITY**
- Stock to satisfy immediate needs
- Packaged on spools in lengths of 50 to 1000 ft. to meet a wide variety of volume requirements
- Metric lengths available for added flexibility
- Low-smoke, zero-halogen jacket options to meet specific requirements
- Pre-assembled with connectors upon request for added convenience
## Mechanical Characteristics

**Temperature Range [°C]**

-65 to 80

**Min. Inside Bend Radius**

<table>
<thead>
<tr>
<th>Unit</th>
<th>HFE 100D</th>
<th>HFE 160D</th>
</tr>
</thead>
<tbody>
<tr>
<td>[in]</td>
<td>0.25</td>
<td>0.50</td>
</tr>
<tr>
<td>[mm]</td>
<td>6.35</td>
<td>12.7</td>
</tr>
</tbody>
</table>

**Weight**

<table>
<thead>
<tr>
<th>Unit</th>
<th>HFE 100D</th>
<th>HFE 160D</th>
</tr>
</thead>
<tbody>
<tr>
<td>[lbs/100ft]</td>
<td>1.30</td>
<td>2.90</td>
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<tr>
<td></td>
<td>19.39</td>
<td>43.25</td>
</tr>
<tr>
<td>[kg/100m]</td>
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</tr>
</tbody>
</table>

### Electrical Characteristics

**Characteristic**

**Impedance [ohms]**

- 50 ± 1.0

**Capacitance [Nominal]**

- [pF/ft]: 29.3, 96.1
- [pF/m]: 29.3, 96.1

**Velocity of Propagation [%]**

- 70%

**Shielding Effectiveness [dB @ 1 GHz]**

- >90 dB

**Maximum Voltage, VRMS**

- 2000

**Signal Delay**

- [ns/ft]: 1.45, 4.76
- [ns/m]: 1.45, 4.76

### Typical Attenuation [dB/100ft] / Average Power [Watts CW] @ 20°C See Level

<table>
<thead>
<tr>
<th>Frequency [GHz]</th>
<th>ATTN</th>
<th>POWER</th>
<th>ATTN</th>
<th>POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>9.0</td>
<td>354.0</td>
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<tr>
<td>1.0</td>
<td>65.0</td>
<td>69.0</td>
<td>65.0</td>
<td>69.0</td>
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<tr>
<td>1.0</td>
<td>48.0</td>
<td>48.0</td>
<td>48.0</td>
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</table>

*For Maximum Attenuation add 5%