Temp-Flex® MediSpec™ Micro Coaxial Cables

Customize end-to-end coaxial assemblies while achieving high signal integrity and performance in critical medical applications with Temp-Flex® MediSpec™ Micro Coaxial Cables

Temp-Flex MediSpec Micro Coaxial Cables deliver a custom solution with high signal-integrity delivery using a variety of fluoropolymers and conductor types while maintaining challenging mechanical dimensions. Optional high-temperature jacket materials provide continuous operation in thermally challenging environments. Our ability to customize packaging through bundling and ribbonizing provides solutions to a range of applications. These micro-miniature coaxial cables provide typical operating bandwidth up to 50 MHz in a dense package, ideal for advanced imaging. Technology is leveraged with other Molex micro connectors to provide complete solutions for invasive and non-invasive medical imaging and patient monitoring.

Features and Benefits

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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<tbody>
<tr>
<td>Low-loss insulation material</td>
<td>Enables high signal integrity for bandwidths up to 50 MHz</td>
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<tr>
<td>High-temperature, flexible FEP and PFA fluoropolymer dielectric insulation materials</td>
<td>Withstand high-temperature soldering termination. Ideal for agile movement and routing during medical procedures. Provides a drop-in alternative to competitive PTFE and ePTFE tape-wrapped dielectric constructions</td>
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<td>Solid conductor down to 48 AWG wire</td>
<td>Meets the precision and high-density signal packaging requirements for invasive and implanted applications</td>
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<td>Bundled, ribbon and hybrid ribbon (intermittent or continuous) cable versions available in a highly flexible, dense package</td>
<td>Customized packaging based on application requirements</td>
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<td>Diverse jacket options including biocompatible materials</td>
<td>Designed to customers' specific applications (invasive, non-invasive and external)</td>
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<td>Available as complete assemblies with Molex micro connectors for select cable sizes and connector types</td>
<td>End-to-end solution for customers requiring signal integrity characterization reports</td>
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Applications

Medical
- Invasive and non-invasive imaging
- Patient monitoring
- Medical probes

Data Computing & Telecommunication/Networking
- Test and measurement equipment
- Consumer Electronics
- Wireless communications
- Internal flat panel displays
- Electronic equipment (pc, notebooks, LCD's, PDA's)
- Gaming systems
- Mobile antenna (GPS/radio system, Charge Coupled Device Camera – used in multiple industries)
Temp-Flex® MediSpec™ Micro Coaxial Cables

Specifications

Reference Information
Packaging: Per customer request
UL File No.: E61522
Mates With:
  Select Molex micro connectors
Designed In: Millimeters
RoHS: Yes
Halogen Free: No

Construction
Conductor Material:
  Silver-plated copper and copper alloy
Conductor Type: Solid or stranded
Conductor Size: 32 to 48 AWG
Dielectric Material: PFA and FEP
Shield:
  Served or Braided
    (SPC, high-strength copper alloy, TPC)
Jacket Material:
  ETFE, PFA, FEP, Pebax® TPE, THV, PVDF

Electrical
Voltage (max.):
  Dependent on material and wall thickness
Current (max.):
  Dependent on material and wall thickness
Dielectric Constant: 2.1 (PFA and FEP)
Dielectric Withstanding Voltage:
  250 to 3000V DC (dependent on material and wall thickness)
Insulation Resistance:
  Dependent on material and wall thickness
Operating Bandwidth: 50 MHz

Mechanical
Bend (+/- 90°) Flex Life:
  Dependent on specific part number
Rolling Flex Life:
  Dependent on specific part number
Weight:
  Dependent on specific part number

Physical
Fire Resistance: UL94 V-0
Operating Temperatures:
  ETFE: -55 to +150°C
  FEP: -55 to +200°C
  PFA: -55 to +260°C
Operating Temperatures: (varies with the grade of jacket material used)
  TPE: -40 to +125°C
  THV: -50 to +80°C
  PVDF: -40 to +125°C

*Pebax is a registered trademark of Arkema

www.molex.com/tempflex/microcoax.html