

Cardinal Flex High-Frequency Flexible RF Test Cables >

Engineered to support high-performance, high-frequency RF test and measurement applications, Cardinal Flex High-Frequency Flexible RF Test Cables provide phase-stable and low-loss connections for frequencies up to 110 GHz. Rugged cable construction and a small outside diameter (OD) ensure repeatable results in dense lab setups and portable tests that require tight bend radii and frequent connection cycles. Multiple connector options help avoid adapter stacks, increase design flexibility, simplify designs and accelerate testing cycles.



ADVANTAGES AND FEATURES

Simplifies performance verification and troubleshooting

Every cable assembly includes documented test results, streamlining baseline performance verification and reducing testing time.

Reduces adapter stacks and setup complexity

Available connector interfaces, ranging in size from 1.0mm to N Type and SMA, reduce the need for adapters, simplify integration with instruments and fixtures, and improve system performance.

Accelerates testing timelines

The variety of off-the-shelf cable-length options available on short notice through distribution circumvents bottlenecks and downtime, minimizing schedule risk while reducing the need to stock from multiple specialty suppliers.

Frequency Range	18 to 110 GHz
Typical VSWR	< 1.4:1 up to 110 GHz (dependent upon connector selection)
Phase Stability	< $\pm 5^\circ$ @ 67 GHz, < $\pm 10^\circ$ @ 110 GHz
Connector Interface Options	1.0, 1.85, 2.4, 2.92 or 3.5mm, SMA, N Type

Avoids low-performance effects from space-constrained routing

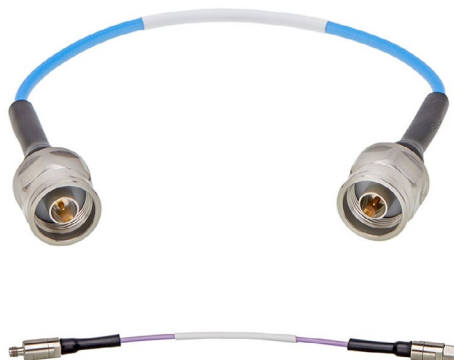
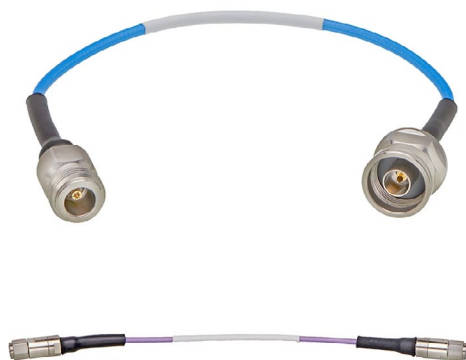
Custom cable lengths as short as 152mm (6") and tight bend capability make it easy to fit fixtures and benches without compromising routing, reach or performance.

Helps prevent measurement uncertainty

Impedance tolerance of $\pm 1\%$ supports low voltage standing wave ratio (VSWR) behavior, ensuring measurements are clean and reliable while minimizing rework.

Ensures consistent performance in high-cycle applications

Rated at ≥ 500 mating cycles across interfaces, these cables enable frequent connection and disconnection in daily test-and-measurement workflows without adversely affecting test result consistency.



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MARKETS AND APPLICATIONS

Server & Storage

224G systems
448G systems

Telecommunications

Automated test equipment
High-speed data transmission systems
Internet of things (IoT) devices
Network systems
Testing and instrumentation devices
Wireless communications equipment

Test & Measurement

Handheld test sets
Vector network analyzers



224 Systems



Testing and
Instrumentation Devices



Handheld Test Sets

SPECIFICATIONS

Reference Information

Packaging: Bag
Designed in: Millimeters
RoHS: Yes
Halogen Free: Yes
Series: 73239

Electrical

Frequency Range: DC to 110 GHz
VSWR (typical): < 1.4:1 up to 110 GHz, depending on connector type
Phase Stability: < $\pm 5^\circ$ @ 67 GHz; < $\pm 10^\circ$ @ 110 GHz
Impedance: 50 Ohms $\pm 1\%$ (supports very low VSWR along the transmission path)
Velocity of Propagation: Up to 80%
Insertion Loss: 11.95 dB per 1.0m @ 110 GHz, depending on connector type
Dielectric Withstanding Voltage: 350 to 1,000V DC, depending on assembly configuration

Mechanical

Connector Interface Options:
Up to 18 GHz, ultra-low loss—SMA plug, N-type plug/jack
Up to 26.5 GHz—3.5mm plug/jack
Up to 40 GHz—2.92mm plug/jack
Up to 50 GHz—2.4mm plug/jack
Up to 67 GHz—1.85mm plug/jack
Up to 110 GHz—1.0mm plug/jack
Cable Style Options:
18, 26.5, 40 GHz—armored MXR100
50 GHz—armored MXR200
67 GHz—armored MXR300
110 GHz—armored MXR110
Mating Durability: 500 cycles (min.)
Standard Cable Lengths: 305, 610, 914mm (12", 24", 36")—custom lengths of 152mm (6") or more are available

Physical

Dielectric: Low-density polytetrafluoroethylene (PTFE)
Cable Jacket: Fluorinated ethylene propylene (FEP)
Connector Body: Stainless steel
Operating Temperatures: -40 to +85°C