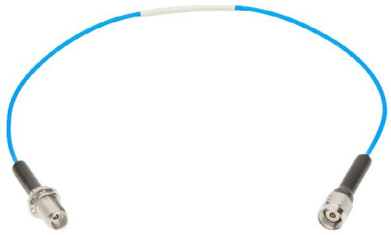
DATASHEET

Cardinal Wave High-Frequency Cable Assemblies ›



With the increasing demand for high-frequency and high-speed connectivity, Cardinal Wave High-Frequency Cable Assemblies provide high-performance solutions for seamless integration with evolving technologies. These cable assemblies meet the demands of rapidly changing environments while reducing maintenance costs and enhancing system efficiency.

ADVANTAGES AND FEATURES

Helps enhance operational reliability and product longevity

The high phase and amplitude stability over temperature and flexure minimizes downtime and reduces the frequency of replacements, leading to significant cost savings and uninterrupted performance.

Offers quick availability, ease of replacement and reduced inventory complexity

The availability of industry-standard lengths — 6", 12", 24" and 36" — enhances the usability, efficiency and cost-effectiveness of the cable assemblies.

Provides enhanced protection and secure mounting

Bulkhead jacks are designed to be mounted on panels or enclosures, providing a secure and stable connection point. The design of bulkhead jacks often includes additional protection from external elements such as dust, moisture or mechanical stress.

Impedance	50 Ohms	
Insulation Resistance	3,000 Megohms	
Lengths	6", 12", 24", 36"	
VSWR	40 GHz Assemblies	≤1.30
	50 GHz Assemblies	≤1.35
	67 GHz Assemblies	≤1.35
Dielectric Withstanding Voltage	40 GHz Assemblies	750V DC
	50 GHz Assemblies	500V DC
	67 GHz Assemblies	500V DC
Operating Temperatures	-55 to +125°C	

Provides superior signal quality and transmission efficiency across all frequencies

The combination of low insertion loss and excellent VSWR results in high-quality signal transmission, maximizing efficiency and maintaining integrity across all frequencies.

Helps maintain electrical broadband performance

The mechanical and environmental robustness ensures that the cable assemblies can withstand and operate effectively under harsh mechanical and environmental conditions without compromising their electrical broadband performance.

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MARKETS AND APPLICATIONS

Wireless Infrastructure
Benchtop test and measurement equipment
Field portable RF/microwave test equipment

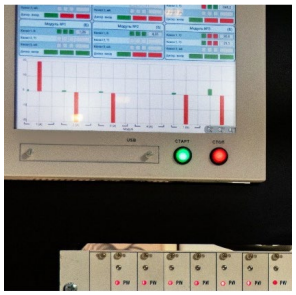
Aerospace and defense
Military communications
Radars
Electronic defense systems
Satellite communications

Networking
High-speed signal integrity backplane test engineering devices
Chipset automated test equipment

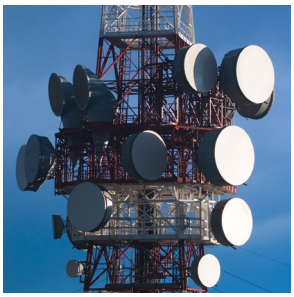
Telecommunications
Point-to-point microwave backhaul radios

RF/Microwave Test Equipment

Radars



Signal Integrity Test Engineering Devices



Point-to-Point Radios

SPECIFICATIONS

40 GHz Assemblies

Reference Information
Packaging: Single cable per bag
Designed in: Inches
Connector Styles: 2.92 mm plug, 2.92 mm jack
Cable Styles: Flexible phase stable .047/.086 cable
Lengths Standard: 6", 12", 24", 36"
RoHS: Yes

Electrical
Impedance: 50 Ohms
Frequency Range: DC to 40 GHz
VSWR: ≤1.30 (DC to 40 GHz)
Dielectric Withstanding Voltage: 750V DC
Voltage Rating: 335V RMS
Insulation Resistance: 3,000 Megohms

50 GHz Assemblies

Reference Information
Packaging: Single cable per bag
Designed in: Inches
Connector Styles: 2.40 mm plug, 2.40 mm jack
Cable Styles: Flexible phase stable .047/.086 cable
Lengths Standard: 6", 12", 24", 36"
RoHS: Yes

Electrical
Impedance: 50 Ohms
Frequency Range: DC to 50 GHz
VSWR: ≤1.35 (DC to 50 GHz)
Dielectric Withstanding Voltage: 500V DC
Voltage Rating: 250V RMS
Insulation Resistance: 3,000 Megohms

67 GHz Assemblies

Reference Information
Packaging: Single cable per bag
Designed in: Inches
Connector Styles: 1.85 mm plug, 1.85 mm jack
Cable Styles: Flexible phase stable .047/.086 cable
Lengths Standard: 6", 12", 24", 36"
RoHS: Yes

Electrical
Impedance: 50 Ohms
Frequency Range: DC to 67 GHz
VSWR: ≤1.35 (DC to 67 GHz)
Dielectric Withstanding Voltage: 500V DC
Voltage Rating: 250V RMS
Insulation Resistance: 3,000 Megohms

DATASHEET

Cardinal Wave High-Frequency Cable Assemblies ›

SPECIFICATIONS

0.047" Cables

Mechanical

Durability: ≥500 cycles
Bending Radius Static (Min.): 0.23" (6.00mm)
Bending Radius Dynamic (Min.): 0.59" (15.00mm)
Coupling Torque: 7 to 10 in-lbs
Coupling Nut Retention Force: >60 lbs

Physical

Operating Temperatures: -55 to +125°C

0.086" Cables

Mechanical

Durability: ≥500 cycles
Bending Radius Static (Min.): 0.55" (14.00mm)
Bending Radius Dynamic (Min.): 1.10" (28.00mm)
Coupling Torque: 7 to 10 in-lbs
Coupling Nut Retention Force: >60 lbs

Physical

Operating Temperatures: -55 to +125°C

Order No. 987652-8571 USA/0k/GF/2025.04