

1 M Fire Rated Type N to Type N M/F SPF-250 Low PIM Cable Jumper

CASPF250016-1M



Configuration

- Connector 1: N Male
- Connector 2: N Female
- Cable Type: SPF-250

Features

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- FRPE Jacket
- Shielding Effectivity > 100 dB
- 100% Tested with PIM Test Results Marked on Cable
- 1.25 Inch Minimum Bend Radius
- Low Loss with Excellent VSWR



Applications

- Distributed Antennas Systems (DAS)
- Fire Rated Installations
- Low PIM Applications
- Multi-Carrier Communication Systems

Description

PolyPhaser CASPF250016-1M is a 1 M Fire Rated Type N to Type N M/F SPF-250 Low PIM Cable Jumper built using high quality components by skilled technicians to ensure a reliable product. The Type N Male to Type N Female jumper connections are designed to industry standard interface dimensions to ensure superior performance. These low PIM corrugated cable assemblies are durable and fire rated for applications that require these parameters. All PolyPhaser cable assemblies are available for same day shipment to fulfill your urgent needs. This high-quality RF coaxial assembly is perfect in many RF Interconnect applications such as low PIM applications, distributed antenna systems (DAS), fire rated installations, and many other RF systems. The CASPF250016-1M Type N to Type N low PIM cable assembly is the perfect companion to PolyPhaser line of products, particularly when used as an antenna jumper.

The quarter inch low PIM fire rated coax used in these Type N to Type N assemblies is a .250 inch diameter copper corrugated coax with a black FRPE jacket. This cable's foam PE dielectric is low loss material with a phase velocity of 83% and offers excellent passive intermodulation (PIM) performance better than -160 dBc. The construction of the quarter inch copper corrugated jumper results in a minimum bend radius of 1.25 inches. The cable assembly's combination of Type N to Type N M/F and Times Microwave's SPF-257 low PIM plenum rated cable supports a maximum operation frequency of 5.8 GHz. Each cable assembly is installed with heat shrink booting on each end and a PIM label with the measured PIM level. You can find detailed performance specifications in the product datasheet. All PolyPhaser assemblies are tested and inspected prior to shipping.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:
[1 M Fire Rated Type N to Type N M/F SPF-250 Low PIM Cable Jumper CASPF250016-1M](#)

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Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
VSWR			1.4:1	
Velocity of Propagation		83		%
Passive Intermodulation			-160	dBc
Capacitance		24 [78.74]		pF/ft [pF/m]
Inductance		0.054 [0.18]		uH/ft [uH/m]

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.45	0.7	1	2.5	5.8	GHz
Insertion Loss (Max.)	1.75	2.15	2.75	4.33	6.9	dB

Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax cable and connectors used in this assembly. Insertion Loss is estimated as $0.1 \times \sqrt{\text{FGHz}}$ dB for the male connector and 0.1 for the female connector.

Mechanical Specifications

Size

Length	39.37 in [100 cm]
Diameter	0.94 in [23.88 mm]
Weight	0.347 lbs [157.4 g]

Cable

Cable Type	SPF-250
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper Clad Aluminum
Dielectric Type	Foam PE
Number of Shields	1
Shield Layer 1	Helically Corrugated Copper Tube
Outer Conductor Material and Plating	Copper
Outer Conductor Diameter	0.252 in [6.4 mm]
Jacket Material	FRPE, Black
Jacket Diameter	0.303 in [7.7 mm]
One Time Minimum Bend Radius	1.25 in [31.75 mm]

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Bending Moment 0.5 lbs-ft [0.68 N-m]

Connectors

Description	Connector 1	Connector 2
Type	N Male	N Female
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Phosphor Bronze, Silver	Phosphor Bronze, Silver
Contact Plating Specification	196 µin	196 µin
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating		Brass, Tri-Metal
Outer Conductor Plating Specification		118 µin
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	118 µin	118 µin
Coupling Nut Material and Plating	Brass, Tri-Metal	
Coupling Nut Plating Specification	118 µin	
Torque	9.74 in-lbs [1.1 Nm]	10 in-lbs [1.13 Nm]

Environmental Specifications

Temperature

Operating Range -40 to +85 deg C

Storage Range -40 to +85 deg C

Environmental Specification Notes:
CMR (Riser) Fire Rated

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Compliance Certifications

Plotted and Other Data

Notes:

- Values at 25°C, sea level.

PolyPhaser protects and increases the reliability of global RF communications networks, including transportation, telecommunications, defense, security and industrial applications, with superior RF surge protection technologies including DC Block, DC Pass and Ultra Low PIM. Backed by responsive service and expert technical support PolyPhaser continually expands its product offering and services to serve engineers' urgent needs for RF components in mission critical communication networks.

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URL: <https://www.polyphaser.com/1-m-fire-rated-type-n-to-type-n-m-f-spf-250-low-pim-cable-jumper-p.aspx>

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CASPF250016-1M CAD Drawing

