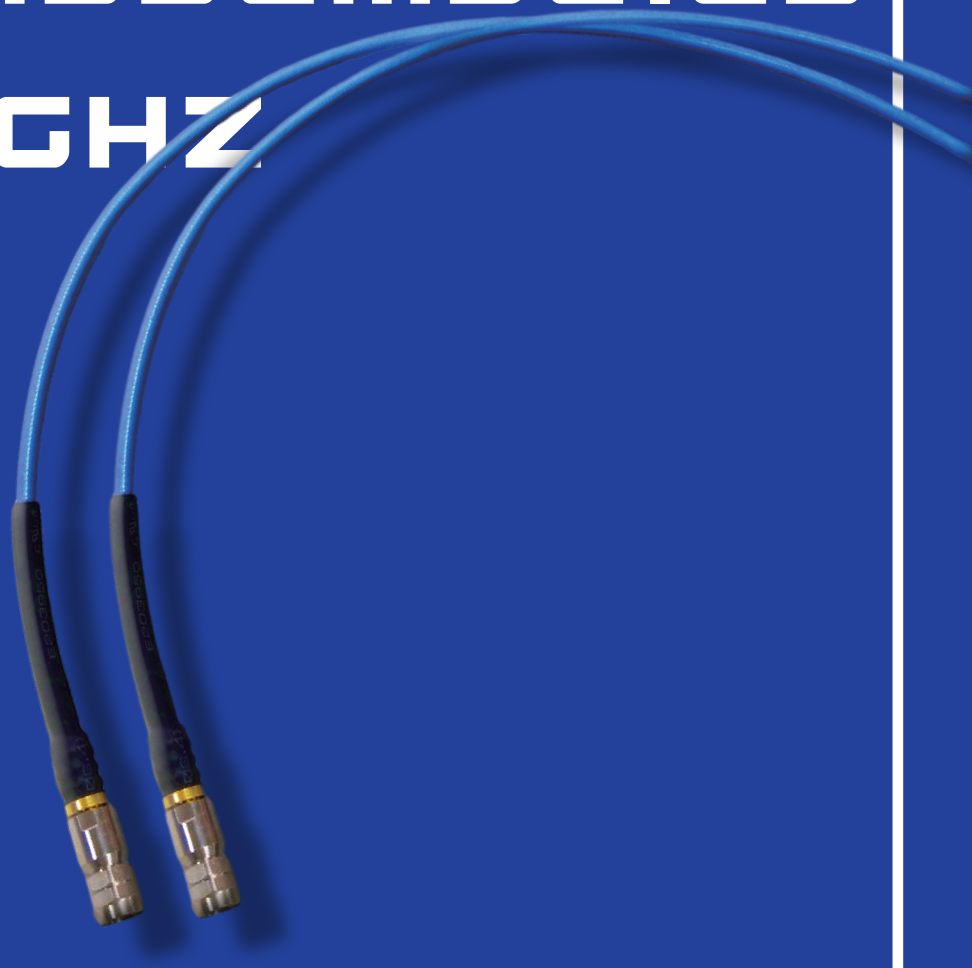
ROSNOL
MP-SERIES

MULTI-PURPOSE TEST ASSEMBLIES DC-67 GHZ



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N CAGE Code: SFKK0 / ISO9001 certified

Benefits

- ✓ Low attenuation/insertion loss
- ✓ High reliability and repeatability of measurements as well as robust amplitude and phase stability up to 67 GHz (even with longer cables)
- ✓ Variety of options including customization according to your requests
- ✓ Small minimum bend radius and high flexibility allowing for convenient usage
- ✓ Superior price-performance ratio
- ✓ Low weight and small diameter facilitating easy installation while requiring little space

Applications

- ✧ Automated test equipment (ATE) testing
- ✧ Board-to-board and module-to-module connections
- ✧ Backplane connectivity solutions
- ✧ Evaluation and load board applications
- ✧ Test bench and other related lab applications
- ✧ Environmental and thermal test chambers
- ✧ Wafer probing applications
- ✧ Inside-box wiring of equipment
- ✧ Optical module applications
- ✧ Telecommunication and antenna array solutions
- ✧ Phase/time match solutions
- ✧ and many more...

Why Rosnol ?

3 Essential Points:

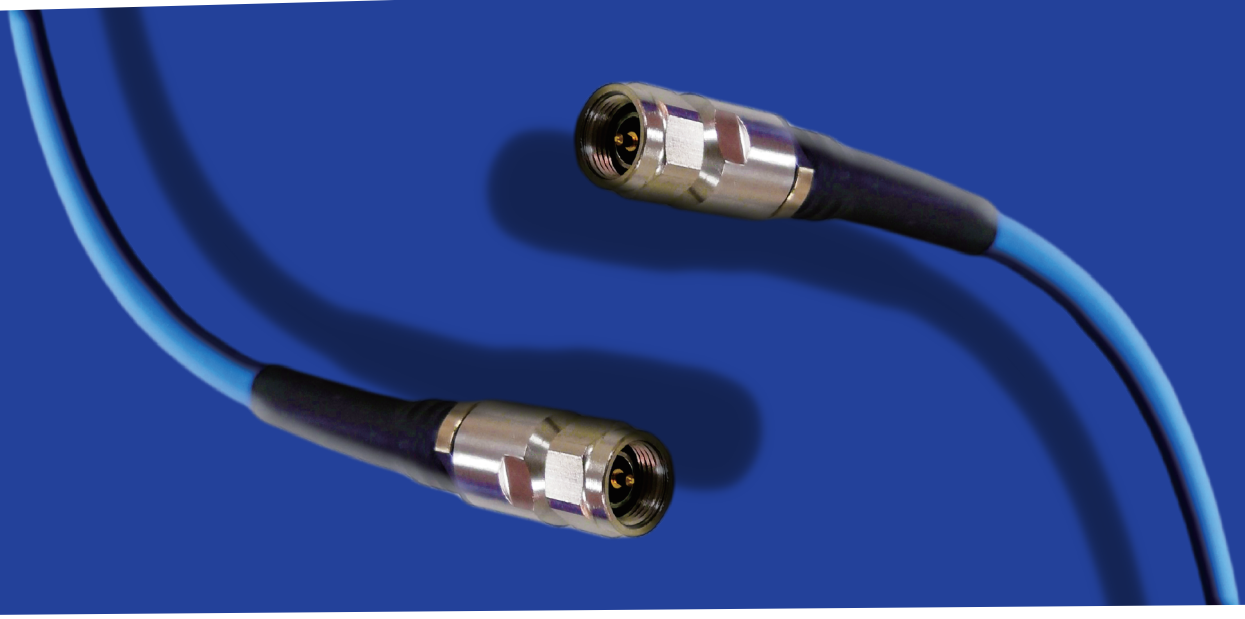
- ✧ Unbeaten cost performance ratio: Good quality at good price
- ✧ International experience: Active in 28 countries across the globe (as per end of 2020)
- ✧ Strong customer support: That's what our customers tell us (customer satisfaction survey)

Description:

Rosnol's MP-series precision cables are a high quality, multi-purpose testing cable series. This series consistently receives positive feedback from our customers making it our best-selling cable assembly series. The MP assemblies are the optimal choice for general testing applications and a wide range of other uses. Applications include both commercial (e.g., wafer probe testing, general testing, cabling inside housings) as well as military usage (e.g., missile seekers, phased-array radars). These assemblies offer low insertion loss, superior return loss/VSWR, and favorable amplitude and phase stability values.
Apart from the electrical specifications, MP-series cables convince in terms of reliability and repeatability of accurate measurements. Particularly the price-performance ratio of the Rosnol MP cable series appeals to our many domestic and international customers.

Flexibility:

Rosnol's MP cable series provides favorable flexibility values to make your life easier. Their minimum bend radius allows for good cabling inside equipment housings and similar applications that benefit from flexible cable assemblies.



Variety:

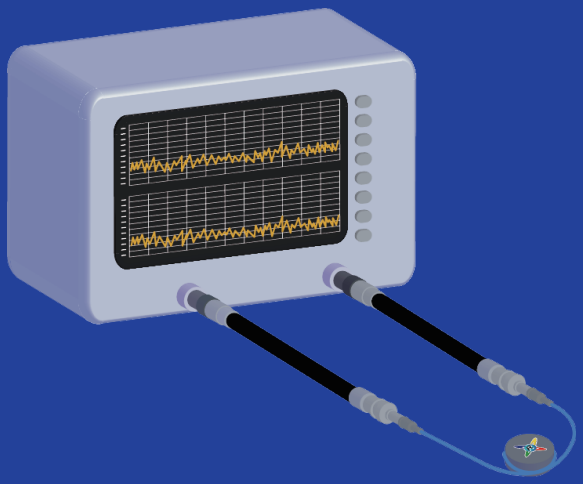
Apart from flexibility, MP-series cable assemblies offer a variety of options for your projects. The MP-series is comprised of cables with frequencies up to 67 GHz, with a wide selection of connectors that perfectly complement the respective cable (e.g., bulkhead; 4- & 2-hole flange; box or swept right angle configuration; customization possible), and high power options. No matter the nature of your project, Rosnol's MP cable series has your back.

Specifications*	MP 841A	MP 533A	MP 533B	MP 422A	MP 420A	MP 320A	MP 284A
Electrical Specifications							
Impedance (Ohm)	50	50	50	50	50	50	50
Max. Frequency (GHz)	18	26.5	26.5	40	40	50	67
Max. VSWR (min. Return Loss in dB)	1.25 (19.08)	1.25 (19.08)	1.25 (19.08)	1.25 (19.08)	1.25 (19.08)	1.25 (19.08)	1.25 (19.08)
Attenuation (IL) at max. Frequency (dB)	0.87/m 0.27/ft	1.47/m 0.45/ft	1.57/m 0.48/ft	2.10/m 0.64/ft	2.85/m 0.87/ft	3.90/m 1.19/ft	6.90/m 2.11/ft
Capacitance (pF)	86.0 (/m) 26.2 (/ft)	86.0 (/m) 26.2 (/ft)	86.0 (/m) 26.2 (/ft)	80.1 (/m) 24.4 (/ft)	86.0 (/m) 26.2 (/ft)	86.0 (/m) 26.2 (/ft)	88.6 (/m) 27.0 (/ft)
Velocity of Propagation	80%	80%	80 %	84%	80%	83%	75%
Screening Effectiveness (dB)	≥ 100	≥ 100	≥ 100	≥ 90	≥ 100	≥ 100	≥ 100
Phase Stability vs. Bending** (typ/max)	±2°/ ±4.5°	±3°/ ±6.5°	±3°/ ±6.5°	±5°/ ±9.5°	±5°/ ±9.5°	±6°/ ±9.5°	±8°/ ±15.6°
Amplitude Stability vs. Bending** (typ/max)	±0.1 dB/ ±0.2 dB	±0.1 dB/ ±0.2 dB	±0.1 dB/ ±0.2 dB	±0.1 dB/ ±0.2 dB	±0.1 dB/ ±0.2 dB	±0.1 dB/ ±0.2 dB	±0.1 dB/ ±0.2 dB
Phase Stability vs. Temperature***	< 1500 ppm	< 1500 ppm	< 1500 ppm	< 1500 ppm	< 600 ppm	< 1500 ppm	< 4000 ppm
Mechanical Specifications							
Center Conductor	SPC (solid)	SPC (solid)	SPC (stranded)	SPC (solid)	SPC (solid)	SPC (solid)	SPC (solid)
Dielectric	LD PTFE	LD PTFE	LD PTFE	EPTFE	LD PTFE	LD PTFE	EPTFE
Foil	SPC	SPC	SPC	SPC	SPC	SPC	SPC
Braid	SPC	SPC	SPC	SPC	SPC	SPC	SPC
Jacket	FEP	FEP	FEP	FEP	FEP	FEP	FEP
Outer Diameter	8.40 mm (.331in)	5.33 mm (.210 in)	5.33 mm (.210 in)	4.22 mm (.166 in)	4.20 mm (.165 in)	3.20 mm (.126 in)	2.84 mm (.122 in)
Min. Bend Radius (static)	32.3 mm (1.272 in)	9.65 mm (.380 in)	9.65 mm (.380 in)	12.7 mm (.500 in)	10.0 mm (.394 in)	5.08 mm (.200 in)	5.0 mm (.197 in)
Environmental Specifications							
Temp. Range (°C)	-55 to +200	-55 to +165	-55 to +165	-65 to +200	-55 to +165	-55 to +165	-65 to +165
RoHS Compliance	✓	✓	✓	✓	✓	✓	✓
REACH Compliance	✓	✓	✓	✓	✓	✓	✓

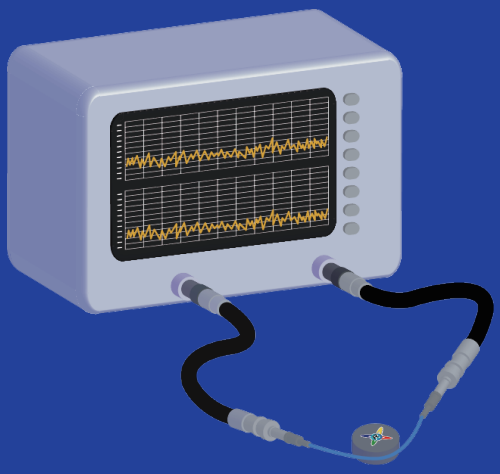
** Unless specified otherwise, all values are based on an assembly of 1m with straight connectors on both sides at sea level*

*** According to IEC60966-1; the cable has been coiled a full 360° around a mandrel of 57 mm (2.25 in) diameter (see image further below)*

**** Temperature range: -40°C to +85 °C*



▲ Wrapped a full 360° around a mandrel of 57 mm (2.25 in) diameter.

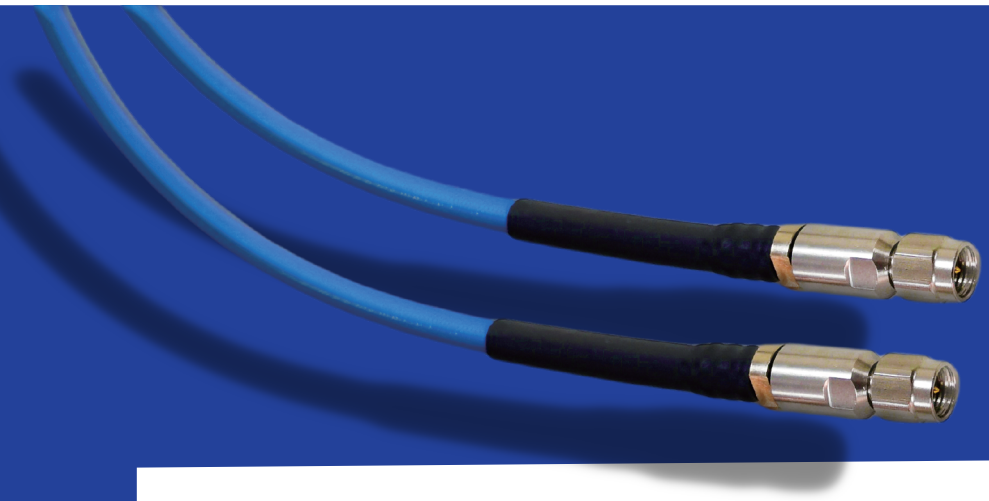


▲ Wrapped 90° around a mandrel of 57 mm (2.25 in) diameter.

Product		12.4 GHz	18 GHz	26.5 GHz	40 GHz	50 GHz	67 GHz
MP284A	IL @20 °C	2.60 dB/m 0.79 dB/ft	3.14 dB/m 0.96 dB/ft	3.99 dB/m 1.22 dB/ft	5.08 dB/m 1.55 dB/ft	5.83 dB/m 1.78 dB/ft	6.90 dB/m 2.11 dB/ft
	Power @20 °C	62 W	50 W	39 W	30 W	25 W	20 W
MP320A	IL @25 °C	1.78 dB/m 0.54 dB/ft	2.17 dB/m 0.66 dB/ft	2.69 dB/m 0.82 dB/ft	3.41 dB/m 1.04 dB/ft	3.90 dB/m 1.19 dB/ft	-
	Power @25 °C	97 W	79 W	65 W	53 W	48 W	-
MP420A	IL @25 °C	1.53 dB/m 0.47 dB/ft	1.86 dB/m 0.57 dB/ft	2.28 dB/m 0.69 dB/ft	2.85 dB/m 0.87 dB/ft	-	-
	Power @25 °C	170 W	153 W	126 W	103 W	-	-
MP422A	IL @20 °C	1.17 dB/m 0.36 dB/ft	1.41 dB/m 0.43 dB/ft	1.74 dB/m 0.53 dB/ft	2.10 dB/m 0.64 dB/ft	-	-
	Power @20 °C	142 W	120 W	99 W	75 W	-	-
MP533A	IL @25 °C	0.97 dB/m 0.30 dB/ft	1.18 dB/m 0.36 dB/ft	1.47 dB/m 0.45 dB/ft	-	-	-
	Power @20 °C	240 W	190 W	155 W	-	-	-
MP533B	IL @25 °C	1.04 dB/m 0.32 dB/ft	1.25 dB/m 0.38 dB/ft	1.57 dB/m 0.48 dB/ft	-	-	-
	Power @20 °C	200 W	170 W	145 W	-	-	-
MP841A	IL @25 °C	0.71 dB/m 0.22 dB/ft	0.87 dB/m 0.27 dB/ft	-	-	-	-
	Power @25 °C	483 W	401 W	-	-	-	-

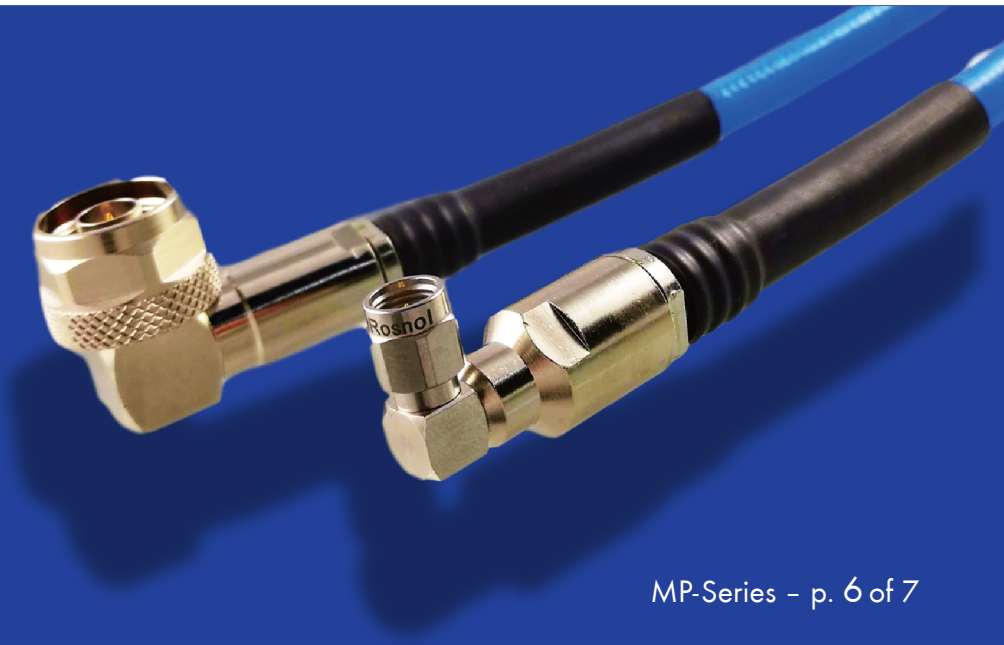
Phase-Matching/Skew-Matching:

Our customers appreciate our engineers' profound expertise in manufacturing phase/skew-matched cables. This also applies to the MP-series cable assemblies,which can be produced with absolute match (definite phase length or time delay values for a set of assemblies +/- tolerance) and relative match (specific window of phase length or time delay values for a set of assemblies +/- tolerance). Different lengths and connector options are available for you to choose from.
We will match these assemblies according to your project's requirements.



Safe Choice:

All our cable assemblies undergo testing and outgoing quality control (OQC) before shipping. Test reports are available for you. In addition to this, Rosnol products come with a 1 year warranty on any damages that resulted from normal handling.



Recommended Connectors:

MP841A	7/16, SMA (18 GHz), Precision N (18 GHz; quick-connect option), Precision TNC (18 GHz)
MP533A & MP533B	BNC, 7/16, SMA (18 GHz), Precision SMA (26.5 GHz), BMA, QMA, Precision N (18 GHz; quick-connect option), Precision TNC (18 GHz), 7mm, 3.5mm
MP420A & MP422A	SMA (18 GHz), Precision SMA (26.5 GHz), BMA, Precision N (18 GHz; quick-connect option), Precision TNC (18 GHz), 3.5mm, 2.92mm, 2.4mm
MP320A	SMA (18 GHz), Precision SMA (26.5 GHz), 2.92mm, 2.4mm
MP284A	2.4mm, 1.85mm
Other connector types available on request. Customization possible.	

Complementary Products:

Many of our customers complement their MP-series cable assemblies with precision adapters, terminations, or other test and measurement components from Rosnol. If these could also be useful for you, then Rosnol can provide you with a broad assortment of complementary products. This makes Rosnol your convenient one-stop-shop for your projects offering you a wide selection of test and measurement components at consistently high quality levels and reducing your search time for the right product. Please visit our website (www.rosnol.com) for further information or simply send your request to info@rosnol.com. We are always happy to work with you.

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ROSNOL® RF/Microwave Interconnect