GORE® PHASEFLEX® Microwave/RF Test Assemblies

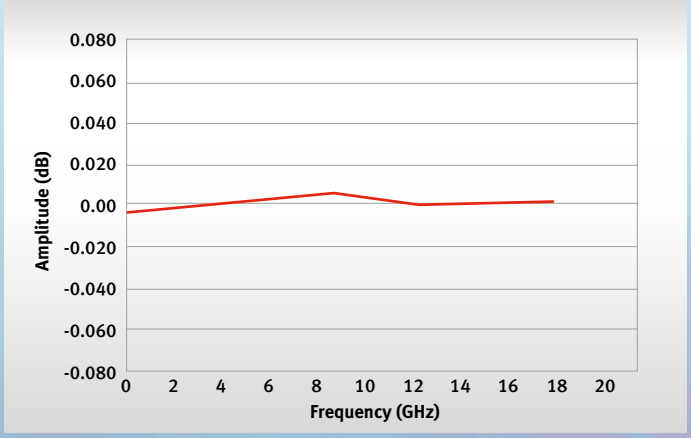
For High Throughput Production Test

Phase and Amplitude Stable Internally Ruggedized Cable Assemblies for High Throughput Production Test

Reduce Total Cost of Test with Durable, Reliable Performance

GORE® PHASEFLEX® Microwave/RF Test assemblies are engineered specifically to reduce total testing costs for production test environments. Their stable performance ensures precise and repeatable measurements, reducing the risk of testing errors and the need for time-consuming troubleshooting and system calibration. GORE® PHASEFLEX® Microwave/RF Test Assemblies are engineered to withstand the frequent torque, bending, and shaking common to test and manufacturing floor environments. These assemblies demonstrate excellent stability performance (see Figure 1). These assemblies are also ideal connecting solutions for field testing applications such as portable instruments.

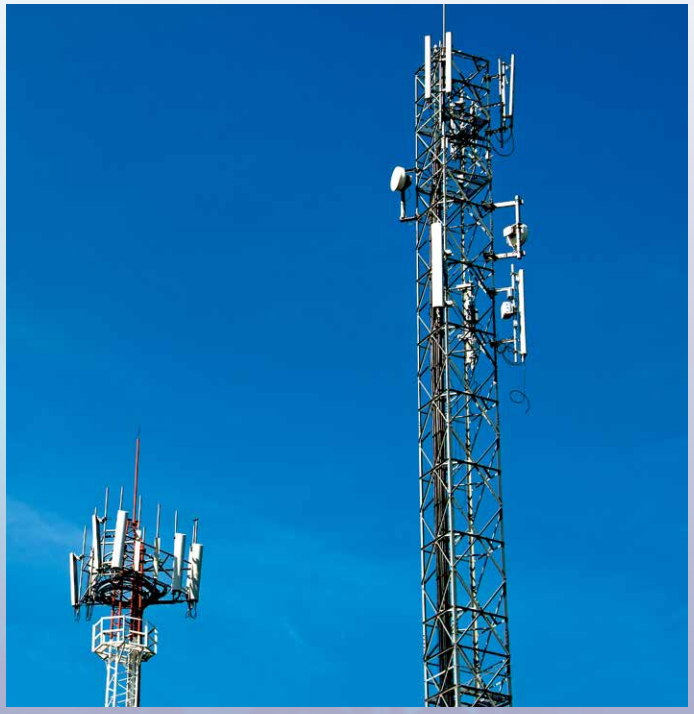
Figure 1: Typical Amplitude Stability with Flexure and Shake[1]



[1] Data is based on a 0.91 m (36 in) assembly.
When cable is wrapped 360° around a 57 mm (2.25 in) radius mandrel.

Benefits

- Consistent, repeatable measurements with stable electrical performance up to 18 GHz
- Longer service life with durable construction that resists crushing, twisting, and kinking
- Enhanced phase and amplitude stability with flexure and temperature
- Increased throughput and reduced downtime with durable and reliable performance



GORE® PHASEFLEX® Microwave/RF Test Assemblies ensure efficiency of high throughput production testing of base station antennas, remote radio unit and RF modules, etc.

Figure 2: GORE® PHASEFLEX® Microwave/RF Test Assemblies - Cable Construction

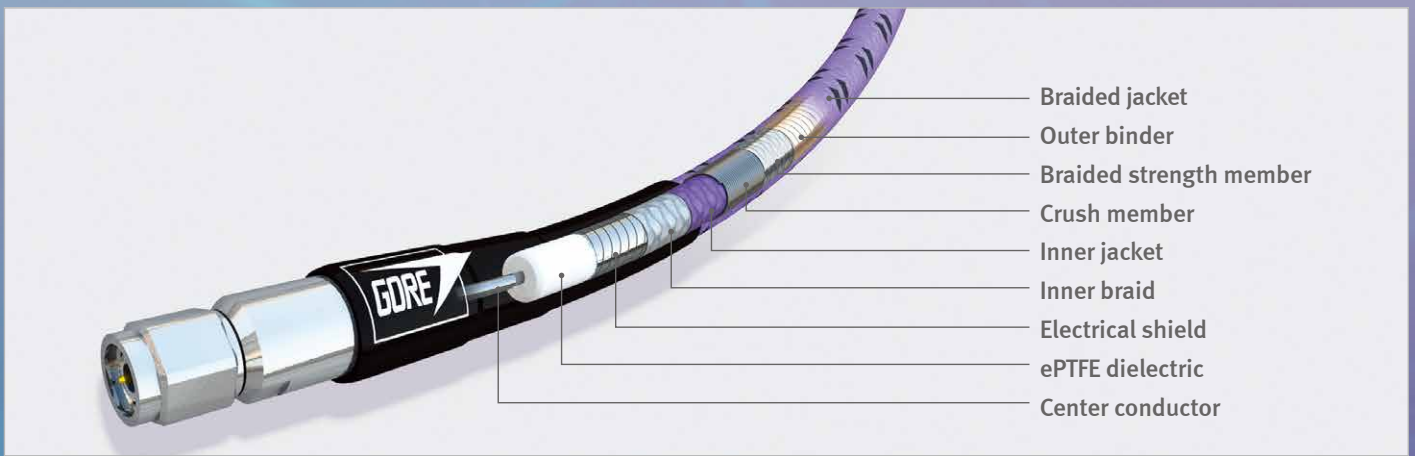


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Table 1: Specifications[1]

	Properties	Value
Electrical Properties	Maximum Frequency (GHz)	18
	Typical VSWR	1.20:1
	Typical Insertion Loss (dB)	1.4
	Impedance (Nominal) (Ohms)	50
	Typical Phase Stability (degree)[2]	±2.0
	Typical Amplitude Stability (dB)[2]	‹ ± 0.05
	Dielectric Constant (Nominal)	1.4
	Velocity of Propagation (Nominal) (%)	85
	Shielding Effectiveness (dB through 18GHz)[3]	› 100
	Time Delay (Nominal) [ns/cm (ns/in)]	0.04 (0.103)
Mech./Env./ Properties	Center Conductor	Stranded
	Overall Diameter [mm (in)]	7.7 (0.305)
	Nominal Weight [g/m (oz/ft)]	147.6 (1.6)
	Minimum Bend Radius [mm (in)]	25.4 (1.0)
	Typical Flex Cycles[4]	100,000
	Temperature Range (˚C)	-55 to 125
	Crush Resistance [kgf/cm (lbf/in)]	44.6 (250)

[1] The electrical specifications in this table are based on a 0.91 m (36 in) assembly length and maximum frequency with straight connectors.

[2] When cable is wrapped 360˚ around a 57 mm (2.25 in) radius mandrel.

[3] Per MIL-STD-1344, method 3008.

[4] When bent ± 90˚ at a radius that is twice the minimum bend radius, test assembly performs reliably through the stated flex cycles.

High Throughput Production Testing Applications

- RF module testing
- Wireless telecommunication component/module testing
- Antenna testing
- Remote Radio Unit/Remote Radio Head testing

*Figure 3: SMA Straight Male Connector**

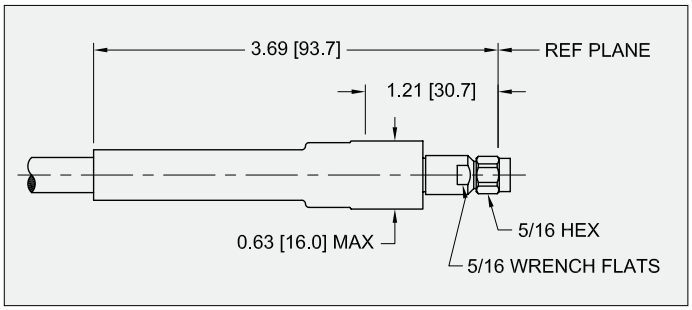
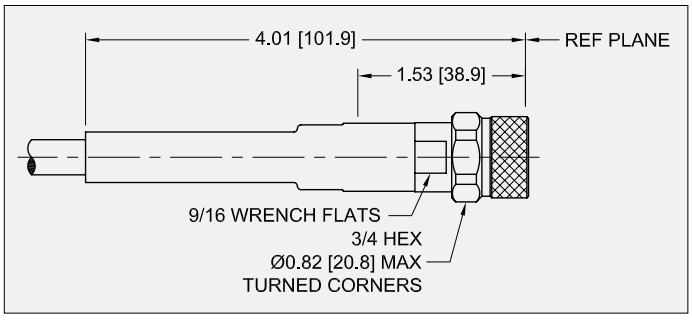


*Figure 4: Precision N Straight Male Connector**



* All dimensions nominal inches (mm) unless otherwise specified.

Table 2: Ordering Information for High Throughput Production Test Assemblies*

Part Number	Connector A	Connector B	Length in (mm)
HP18-77SMSM-036.0	SMA Straight Male	SMA Straight Male	36.0 (914)
HP18-77SMNM-036.0	SMA Straight Male	Precision N Straight Male	36.0 (914)
HP18-77NMNM-036.0	Precision N Straight Male	Precision N Straight Male	36.0 (914)
HP18-77SMSM-048.0	SMA Straight Male	SMA Straight Male	48.0 (1,219)
HP18-77SMNM-048.0	SMA Straight Male	Precision N Straight Male	48.0 (1,219)
HP18-77NMNM-048.0	Precision N Straight Male	Precision N Straight Male	48.0 (1,219)
HP18-77SMSM-060.0	SMA Straight Male	SMA Straight Male	60.0 (1,524)
HP18-77SMNM-060.0	SMA Straight Male	Precision N Straight Male	60.0 (1,524)
HP18-77NMNM-060.0	Precision N Straight Male	Precision N Straight Male	60.0 (1,524)
HP18-77SMSM-078.7	SMA Straight Male	SMA Straight Male	78.7 (1,999)
HP18-77SMNM-078.7	SMA Straight Male	Precision N Straight Male	78.7 (1,999)
HP18-77NMNM-078.7	Precision N Straight Male	Precision N Straight Male	78.7 (1,999)
HP18-77SMSM-120.0	SMA Straight Male	SMA Straight Male	120.0 (3,048)
HP18-77SMNM-120.0	SMA Straight Male	Precision N Straight Male	120.0 (3,048)
HP18-77NMNM-120.0	Precision N Straight Male	Precision N Straight Male	120.0 (3,048)

* Requests for quote will be based on a 50 piece minimum. Please consult your Gore sales contact for any other special business needs.

Accessory Option for High Throughput Production Test Assemblies - Coupling Adapter

The coupling adapter can eliminate the need for a torque wrench, which can increase test efficiency in a high volume production test environment. The coupling adapter will provide the needed torque force to ensure reliable connection and an easy grip.

Figure 5: Assemblies with Coupling Adapters

Figure 6: Coupling Adapters for SMA and Precision N Connectors

Table 3: Ordering Information for Optional Coupling Adapters*

Connector Type	Part No.
SMA Straight Male	HP18-77-MRS
Precision N Straight Male	HP18-77-MRN

* Minimum order quantity for each part number is 50 pieces.

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NOTICE — USE RESTRICTIONS APPLY
Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

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