GORE® PHASEFLEX® Microwave/RF Test Assemblies
For High Density Test/Interconnection

THE SMALLEST, LIGHTEST INTERNALLY RUGGEDIZED MICROWAVE/RF TEST ASSEMBLIES

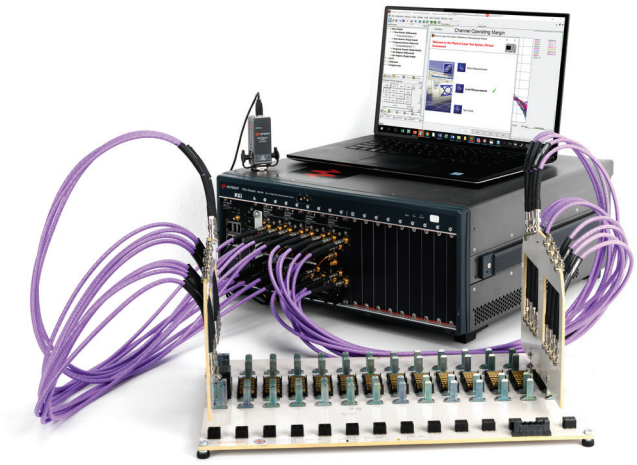
Performance you can gain at the price you can afford. The new benchmark products for high density interconnection, not only for RF and MW modular applications but also for high speed digital test.

Challenges

- Need for consistent repeatable measurements with stable electrical performance
- Wireless devices and aerospace systems are becoming more complex
- Increasing need for multiport testing
- Need to drive down the size and cost of test

Typical Applications

- Modular (PXIe, AXIe) test instruments
- RF switches
- Component/device R&D and production test
- High speed digital test
- 5G test and interconnection



Courtesy of Keysight Technologies, Inc.

Benefits of GORE® PHASEFLEX® Microwave/RF Test Assemblies, 0N Cables

- Consistent, repeatable measurements with stable electrical performance up to 18/26.5/40/50 GHz
- Longer service life with durable construction that resists crushing, twisting and kinking
- Enhanced phase and amplitude stability with flexure
- Lighter weight, smaller O.D. and more flexible
- Increased throughput and reduced downtime with durable and reliable performance

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Figure 1: GORE® PHASEFLEX® Microwave/RF Test Assemblies – 0N Cable Construction

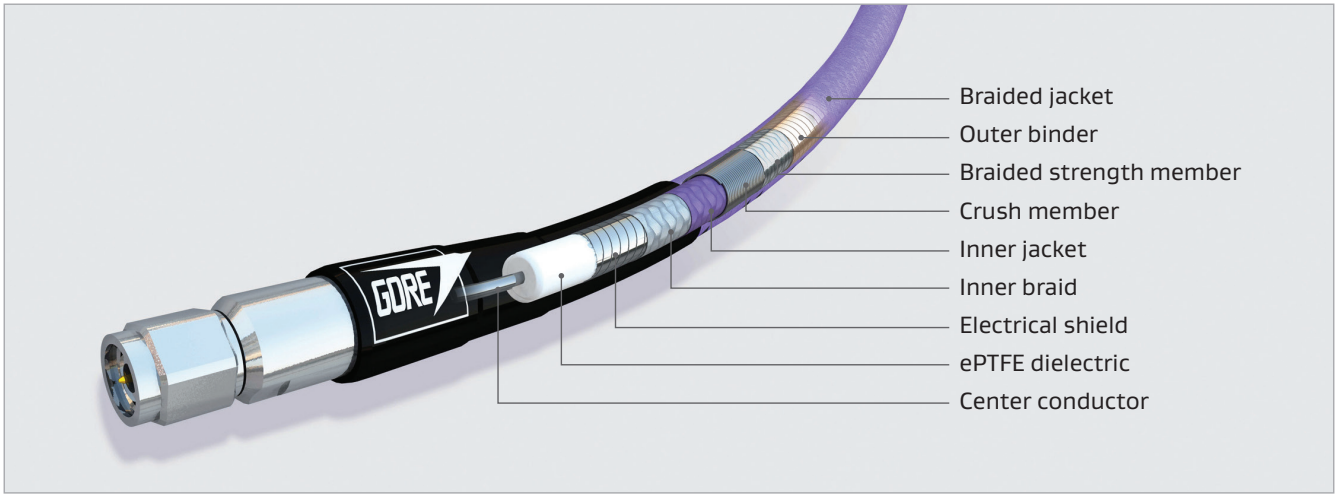
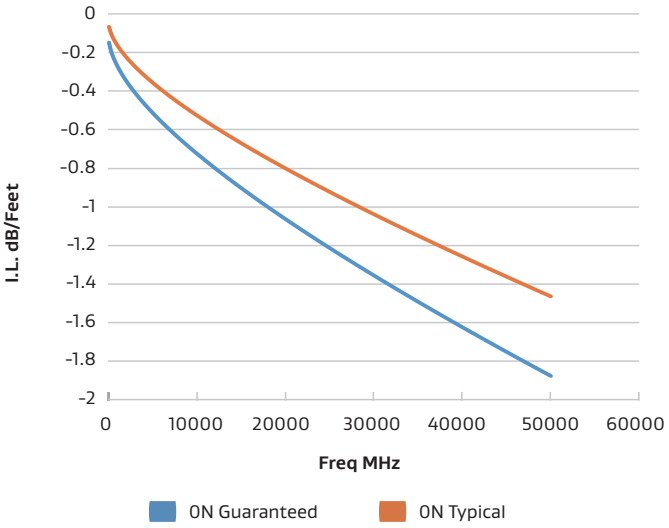


Table 1: Gore Cable Type 0N Specifications[1]

	Properties	Value			
Electrical Properties	Maximum Frequency (GHz)	18	26.5	40	50
	Typical VSWR	1.20:1	1.20:1	1.25:1	1.25:1
	Typical Insertion Loss (dB)	2.0	2.52	3.21	3.67
	Impedance (Nominal) (Ohms)	50			
	Typical Phase Stability (degree)[2]	±2.0	±3.0	±5.0	±6.0
	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	Solid			
	Overall Diameter [mm (in)]	5.3 (0.210)			
	Nominal Weight [g/m]	68.9			
	Minimum Bend Radius [mm (in)]	25.4 (1.0)			
	Typical Flex Cycles[4]	20,000	20,000	12,500	12,500
	Temperature Range (°C)	-55 to 125			
	Crush Resistance [kgf/cm (lbf/in)]	33.5 (187)			

[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] 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.

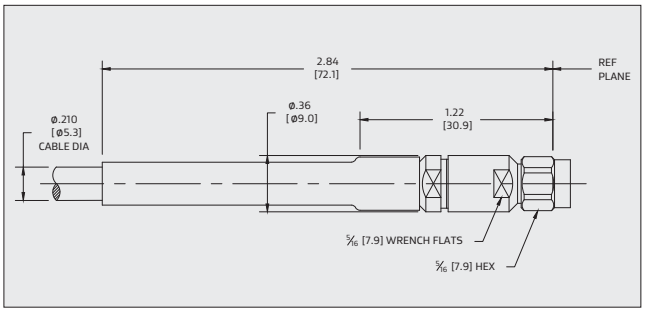
Figure 2: Gore Cable Type 0N Insertion Loss



Connectors Outline Drawings

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

Figure 3: SMA Connectors (Male and Female)



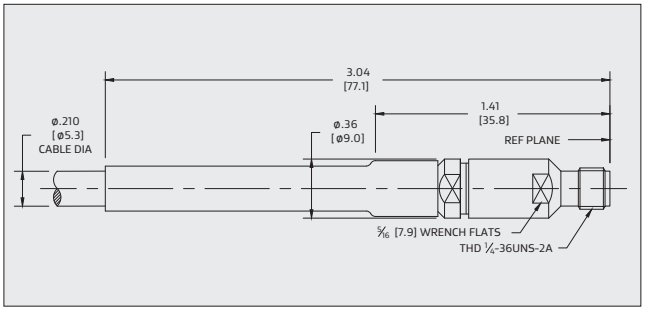
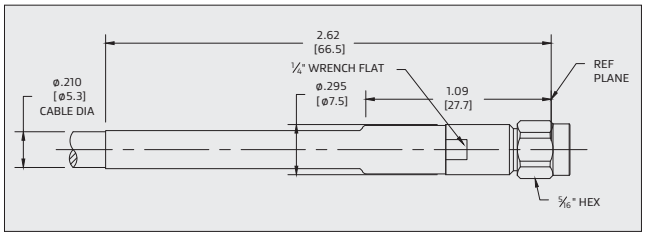


Figure 4: 3.5 mm Connectors (Male and Female)



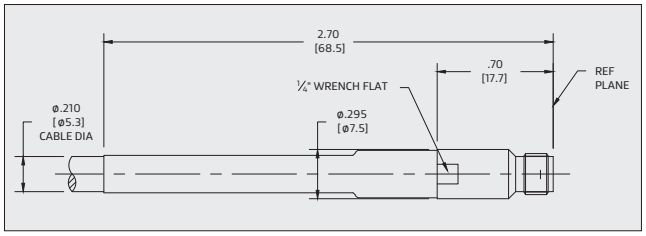
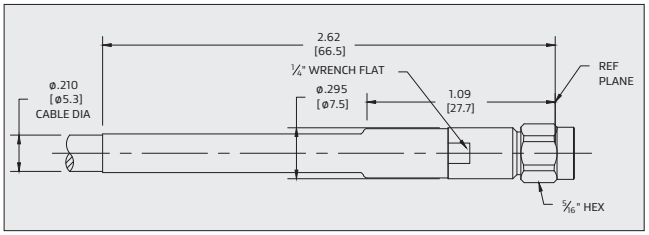


Figure 5: 2.92 mm (Male and Female)



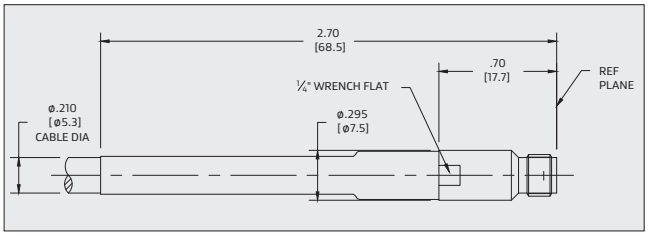
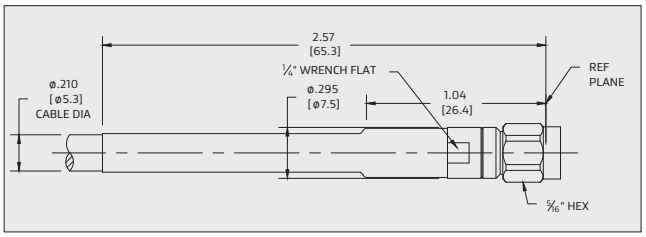


Figure 6: 2.4 mm Connectors (Male and Female)



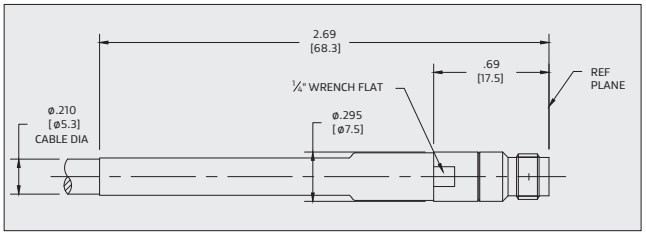


Figure 7: PN Connectors (Male)

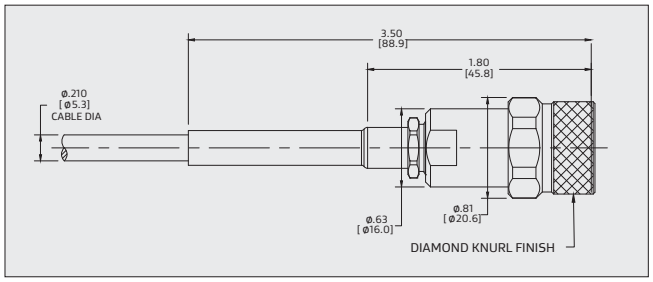


Table 2: Ordering Information for 0N Test Assemblies

Gore Part Number	Connector A	Connector B	Maximum Frequency (GHz)	Typical Application
0NR01Q01XXXX[1]	SMA Straight Male	PN Straight Male	18	VNA
0ND01Q01XXXX[1]	3.5mm Straight Male	PN Straight Male	18	VNA
0NQ01Q01XXXX[1]	PN Straight Male	PN Straight Male	18	VNA
0NR01R01XXXX[1]	SMA Straight Male	SMA Straight Male	18	Modular
0NR01R02XXXX[1]	SMA Straight Male	SMA Straight Female	18	Modular
0ND01D01XXXX[1]	3.5 mm Straight Male	3.5 mm Straight Male	26.5	Modular
0ND01D02XXXX[1]	3.5 mm Straight Male	3.5 mm Straight Female	26.5	Modular / VNA
0N0CQ0CQXXXX[1]	2.92 mm Straight Male	2.92 mm Straight Male	40	Modular / High Speed Digital
0N0CQ0CPXXXX[1]	2.92 mm Straight Male	2.92 mm Straight Female	40	High Speed Digital
0N0CK0CQXXXX[1]	2.4 mm Straight Female	2.92 mm Straight Male	40	High Speed Digital / VNA
0N0CJ0CQXXXX[1]	2.4 mm Straight Male	2.92 mm Straight Male	40	High Speed Digital
0N0CJ0CJXXXX[1]	2.4 mm Straight Male	2.4 mm Straight Male	50	Modular / High Speed Digital
0N0CJ0CKXXXX[1]	2.4 mm Straight Male	2.4 mm Straight Female	50	Modular / VNA

[1] "XXXX" refers to the cable length in inches , for example, 12 inches would be 0120.
0N cable assembly length options (inch): 12.0, 24.0, 36.0, 39.4, 48.0, 60.0, and 78.8. For customized length please consult Gore Sales.

W. L. Gore & Associates
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