



# Phaseflex®

MICROWAVE/RF TEST ASSEMBLIES

## 110 GHz Test Assemblies

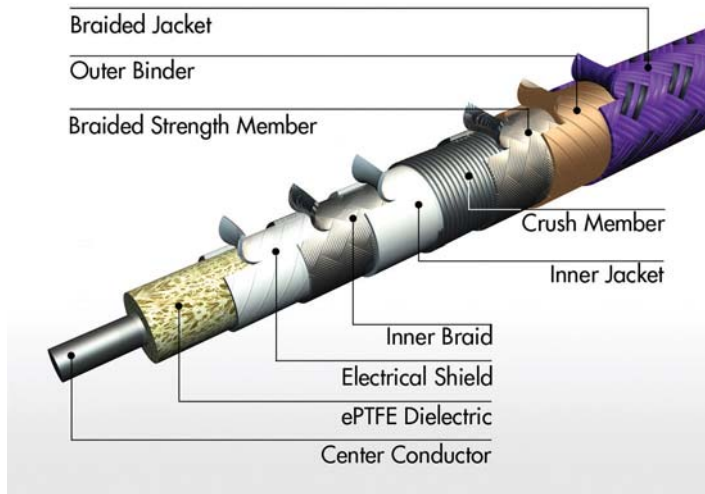
### Summary

GORE™ PHASEFLEX® Test Assemblies are designed to optimize test system performance up to 110 GHz while reducing the cost of test and ownership. The assemblies are very flexible and offer excellent stability with flexure and temperature, and torque and crush resistance to ensure a long service life.

### MECHANICAL CHARACTERISTICS

GORE™ PHASEFLEX® 110 GHz Test Assemblies are flexible with no springback which allows easy test set-up and minimizes stress on devices under test, probe tips, and adapters. The assemblies can be flexed, reformed, or repositioned with virtually no chance of damaging the assembly or test components. If a connector is damaged, it can typically be repaired for less than the cost of a new assembly.

### CABLE DESIGN



### CONNECTOR MATERIALS

Center Contact	Gold-plated BeCu
Bead	Ultem™
Body	Stainless steel 303, passivated
Coupling Nut	Stainless steel 303, passivated



### Excellent phase stability and robustness

### FEATURES AND BENEFITS

- Performance through 110 GHz
- Low loss
- Crush and torque resistant
- Flexible and formable
- Phase and amplitude stable with flexure and temperature

### SPECIFICATIONS

Impedance	50 ohms
Frequency Range	DC to 110 GHz
Mating Cycles	500 minimum
Cable OD (nominal)	0.167 in (4.2 mm)
Coupling Torque	4 ±0.5 in-lb (45 ±5.4 N-cm)
Temperature Range	-55°C to +125°C
Minimum Bend Radius	0.4 in (10.2 mm)
Nominal Length Tolerance	±0.12 in (3.0 mm)



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## STABILITY

GORE™ PHASEFLEX® 110 GHz Test Assemblies offer excellent stability with flexure and temperature. Assemblies were bent 90 degrees around a 1-inch radius mandrel resulting in only 4.3 degrees and 0.05 dB change at 110 GHz. After returning the assembly to its original configuration, phase and amplitude returned to their original values. The assemblies also offer very low loss; typical insertion loss of a 16 cm assembly at 110 GHz is 2.14 dB.

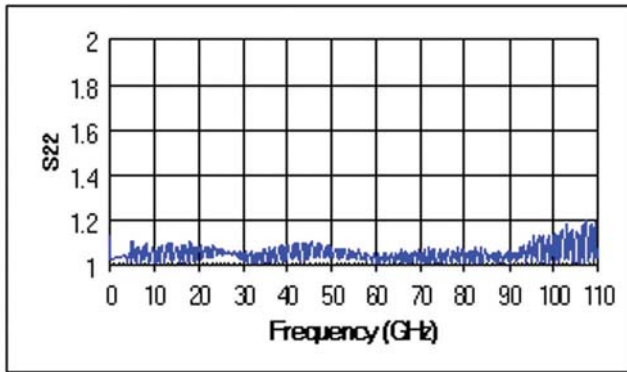
## ELECTRICAL PERFORMANCE

Standard Lengths*	Typical Loss	Guaranteed Loss	Guaranteed VSWR
10 cm	1.34 dB	1.74 dB	> 1.50:1
13 cm	1.74 dB	2.23 dB	> 1.50:1
16 cm	2.14 dB	2.74 dB	> 1.50:1
20 cm	2.67 dB	3.37 dB	> 1.50:1
24 cm	3.21 dB	4.03 dB	> 1.50:1
30 cm	4.01 dB	5.01 dB	> 1.50:1

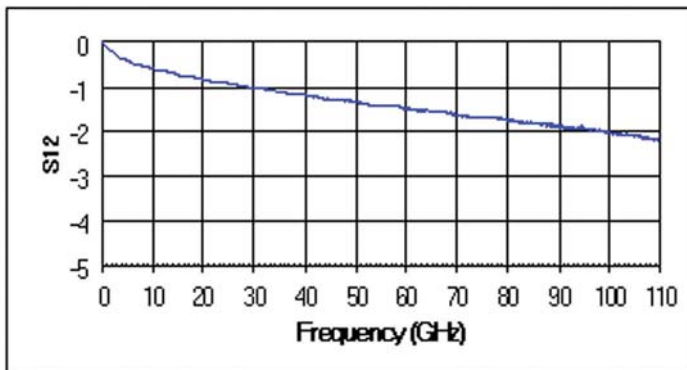
\*Custom lengths available

## TYPICAL PERFORMANCE

Typical VSWR for a 16 cm assembly



Typical insertion loss for a 16 cm assembly



## ORDERING INFORMATION

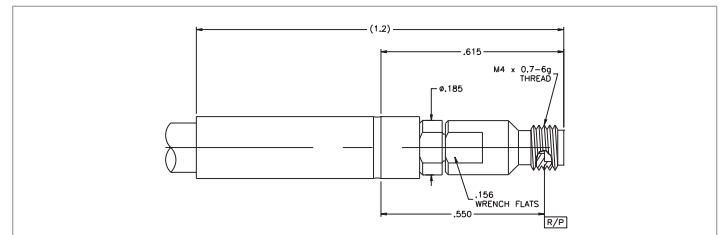
Part numbers consist of 12 alphanumeric characters. The grouping of these characters has a specific meaning.

Select the cable type (CX) with Characters 1 and 2. Characters 3-5 define connector "A" and Characters 6-8 define connector "B" (connector options are 0AB or 0AA). Select the length of the assembly. Character 9 is "C" for centimeters. Characters 10-12 define the assembly length in centimeters.

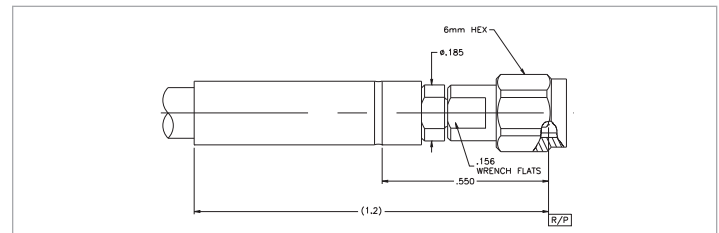
C X	3 4 5	6 7 8	C 10 11 . 12
Cable Type	Connector A	Connector B	Assembly Length

## CONNECTOR DRAWINGS

1.0 mm Straight Socket - Connector Part No. 0AA



1.0 mm Straight Pin - Connector Part No. 0AB



## SUPPORT TOOLING

Part Number	Description
100-123-0660	Digital contact height gage for 1.0 mm pin contact
100-123-0661	Digital contact height gage for 1.0 mm socket contact
100-123-0662	Break-away torque wrench for 6 mm hex, preset at 4 ±0.5 in-lb (45 ±5.4 N-cm)
100-123-0663	Support wrench, 5/32" open end

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