

## Astrolab microbend 2MR

### High performance, ultra low profile, 65.0GHz



microbend® 2MR True Flexible Coaxial Cable Assemblies

#### **Product Description**

microbend® 2MR has all the benefits of the microbend® but with SMPM female connectors on each end that are fully mateable with Corning Gilbert GPPO™ connectors. microbend® 2MR replaces custom length, pre defined bend configuration .047 semi-rigid cable with true flexible coax cable in standard lengths, 100% tested over the full operating frequency.

#### **Product Features**

- Precision SMPM female connectors mateable with GPPO™ from Corning Gilbert
- Stock delivery on standard lengths
- Eliminates need for costly right angle connectors
- Triple shielded for high isolation
- Qualified 40Gbit/second transmission cable assembly
- Frequency range up to 65 GHz
- Guaranteed 10 lb. pull force
- Lower insertion loss than .047 semi-rigid cable
- 100% lead free

#### **Environmental Limits**

Temperature Range: -55°C to +125°C

Thermal Shock: per Mil-Std-202, Method 107, Test Condition A

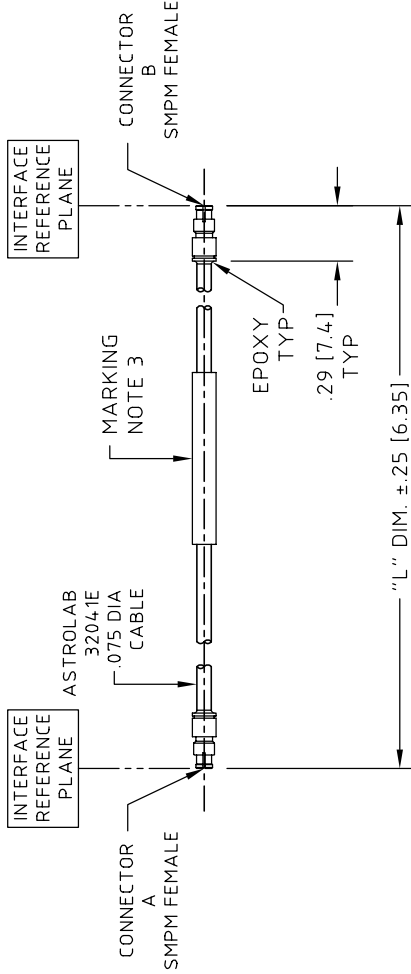
Vibration: per Mil-Std-202, Method 214, Test Condition B

Mechanical Shock : per Mil-Std-202, Method 213, Test Condition A, 40 Gs

#### **Phase Versus Flexure Reference Data**

Astrolab performed phase tests on hundreds of microbend® cable assemblies. Following are two standard Astrolab tests with the corresponding data. In test one microbend® 2MR-5 assembly's were flexed 90° in a 0.1 inch radius directly behind the connector. In test two, microbend® 2MR-5 assembly's were flexed 180° with a 0.25 inch radius in the middle. Typical data is listed here:

	<b>TEST ONE</b>	<b>TEST TWO</b>
40 GHz.	2.9°	6.5°
26.5 GHz.	1.5°	4.5°
18 GHz.	1.0°	3.1°
12.4 GHz.	0.6°	2.3°
2 GHz.	0.1°	0.4°



- NOTES:
1. MATERIALS AND FINISHES  
CABLE, COAXIAL, FLEXIBLE, ASTROLAB 32041E.  
CONNECTOR A  
SMPM FEMALE, ASTROLAB P/N 29971CR-32-41  
CONNECTOR B  
SMPM FEMALE, ASTROLAB P/N 29971CR-32-41
  2. TECHNICAL DATA:  
OPERATING TEMPERATURE . . . . . -55°C TO +125°C.
  3. MARKING: LOOSE SLEEVE ON CABLE AS FOLLOWS:  
"microbend"

ASSEMBLY NO.	REF. NO.	DIM. "L"	2.0 GHz		12.0 GHz		18.0 GHz		40.0 GHz	
			VSWR	LOSS, dB	VSWR	LOSS, dB	VSWR	LOSS, dB	VSWR	LOSS, dB
microbend 2MR-2.5	32041E-2-29971CR-2.5	2.50 (63.5)	1.25 : 1	0.30	1.35:1	0.60	1.50:1	0.74	1.65:1	1.27
microbend 2MR-3	32041E-2-29971CR-3	3.00 (76.2)	1.25 : 1	0.32	1.35:1	0.65	1.50:1	0.81	1.65:1	1.36
microbend 2MR-3.5	32041E-2-29971CR-3.5	3.50 (88.9)	1.25 : 1	0.33	1.35:1	0.70	1.50:1	0.87	1.65:1	1.46
microbend 2MR-4	32041E-2-29971CR-4	4.00 (101.6)	1.25 : 1	0.35	1.35:1	0.75	1.50:1	0.93	1.65:1	1.55
microbend 2MR-4.5	32041E-2-29971CR-4.5	4.50 (114.3)	1.25 : 1	0.37	1.35:1	0.80	1.50:1	0.99	1.65:1	1.64
microbend 2MR-5	32041E-2-29971CR-5	5.00 (127.0)	1.25 : 1	0.39	1.35:1	0.85	1.50:1	1.05	1.65:1	1.74
microbend 2MR-5.5	32041E-2-29971CR-5.5	5.50 (139.7)	1.25 : 1	0.41	1.35:1	0.90	1.50:1	1.11	1.65:1	1.83
microbend 2MR-6	32041E-2-29971CR-6	6.00 (152.4)	1.25 : 1	0.43	1.35:1	0.95	1.50:1	1.17	1.65:1	1.93
microbend 2MR-7	32041E-2-29971CR-7	7.00 (177.8)	1.25 : 1	0.47	1.35:1	1.04	1.50:1	1.29	1.65:1	2.11
microbend 2MR-8	32041E-2-29971CR-8	8.00 (203.2)	1.25 : 1	0.51	1.35:1	1.14	1.50:1	1.41	1.65:1	2.30
microbend 2MR-9	32041E-2-29971CR-9	9.00 (228.6)	1.25 : 1	0.55	1.35:1	1.24	1.50:1	1.54	1.65:1	2.49
microbend 2MR-10	32041E-2-29971CR-10	10.00 (254.0)	1.25 : 1	0.58	1.35:1	1.34	1.50:1	1.66	1.65:1	2.68
microbend 2MR-11	32041E-2-29971CR-11	11.00 (279.4)	1.25 : 1	0.62	1.35:1	1.43	1.50:1	1.78	1.65:1	2.86
microbend 2MR-12	32041E-2-29971CR-12	12.00 (304.8)	1.25 : 1	0.66	1.35:1	1.53	1.50:1	1.90	1.65:1	3.05

www.astrolab.com Phone 1.732.560.3800 Fax 1.732.560.9570	UNLESS OTHERWISE SPECIFIED		 <b>ASTROLAB</b> INC. 4 POWDER HORN DRIVE WARREN NJ 07059 USA	<b>CABLE ASSEMBLY,          SMPM FEMALE TO SMPM FEMALE          RUGGEDIZED 32041E CABLE</b>
	FRACTIONS	± 1/16		
X	± .030			
XX	± .015			
XXX	± .005			
ANGLES	± 1°			
Code Ident. No. 16301				$\sum_d$ microbend 2MR-XX
Issue Mar2004				