

Astrolab microbend KMR

High performance, ultra low profile, 40.0GHz



microbend® KMR True Flexible Coaxial Cable Assemblies

Product Description

microbend® KMR has all the benefits of the microbend® but with a solderless 2.9mm plug on one end and an SMPM female on the other end that mates with the Corning Gilbert GPPO™ connector. microbend® KMR replaces custom length, pre defined bend configuration .047 semi-rigid cable with standard length true flexible coax cable. microbend® KMR is 100% tested over the entire operating frequency.

Product Features

- Precision 2.9mm microbend® plug connector
- Precision SMPM female connector mateable with GPPO™ from Corning Gilbert
- Stock delivery on standard lengths
- Triple shielded for high isolation
- Lower insertion loss than .047 semi-rigid cable
- Eliminates need for costly right angle connectors
- Frequency range up to 40 GHz
- Guaranteed 10 lb. pull force
- 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

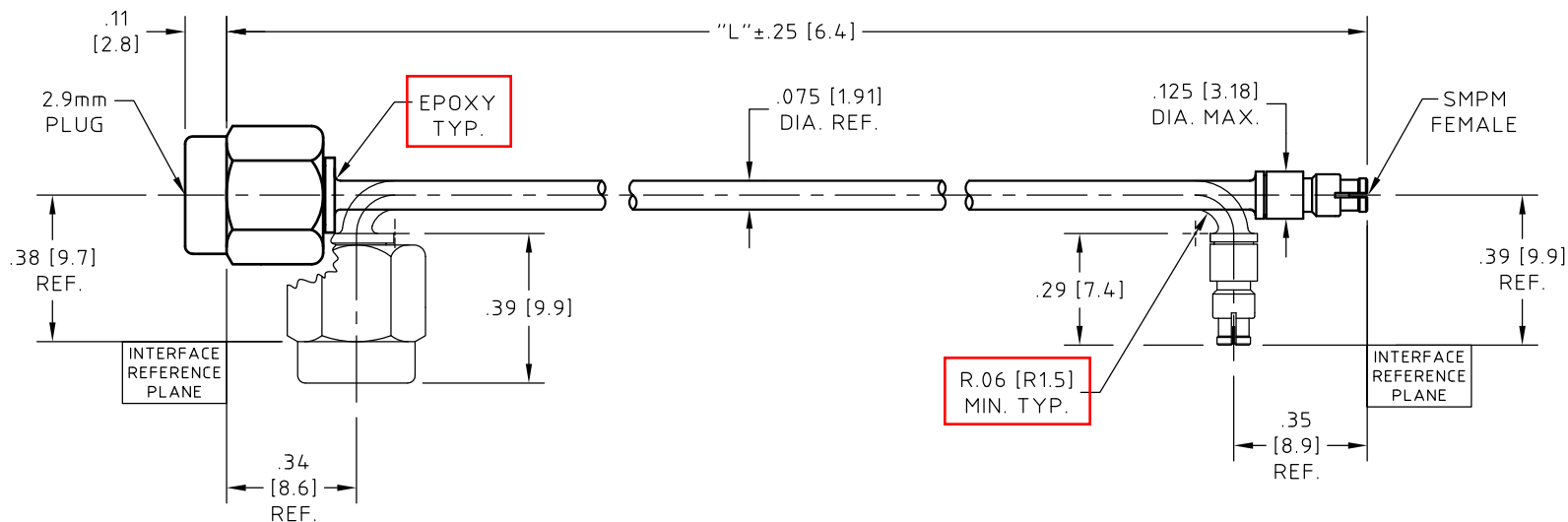
Mechanical Shock : per Mil-Std-202, Method 213, Test Condition A, 40 Gs

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® KMR-5 assembly's were flexed 90° in a 0.1 inch radius directly behind the connector. In test two, microbend® KMR-5 assembly's were flexed 180° with a 0.25 inch radius in the middle. Typical data is listed here:

	TEST ONE	TEST TWO
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°

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NOTES:

- DESCRIPTION,**
CABLE ASSEMBLY, 2.9mm PLUG TO SMPM FEMALE, RUGGEDIZED AND SUITABLE FOR COMPLEX, CONGESTED INSTALLATIONS.
WHEN INSTALLED AND BEND AT THE MINIMUM BEND RADIUS, CABLE ASSEMBLY WILL TOLERATE MULTIPLE $\pm 90^\circ$ ROTATIONS AT THE CABLE CONNECTOR JUNCTION.
- CABLE,**
COAXIAL CABLE HUBER+SUHNER Astrolab P/N 32041E. MEETS OR EXCEEDS MIL-DTL-17. SEE HUBER+SUHNER Astrolab CONTROL DRAWING FOR MATERIALS AND FINISHES.
- CONNECTOR -A-, 2.9mm PLUG:**
HUBER+SUHNER Astrolab P/N 29094KCR-32-41 INTERFACE DIMENSIONS IAW MIL-STD-348. SEE HUBER+SUHNER Astrolab CONTROL DRAWING FOR MATERIALS AND FINISHES.
- CONNECTOR -B-, SMPM FEMALE:**
HUBER+SUHNER Astrolab P/N 29971CR-32-41 INTERFACE DIMENSIONS IAW MIL-STD-348. SEE HUBER+SUHNER Astrolab CONTROL DRAWING FOR MATERIALS AND FINISHES.

NOTES CONTINUED:

- MARKING:**
ALL MARKING WILL BE DONE ON PACKAGING.
- ELECTRICAL CHARACTERISTICS:**
IMPEDANCE, 50.0 Ohms NOMINAL.
FREQUENCY, INSERTION LOSS AND VSWR, SEE CHART.
- MECHANICAL:**
OPERATING TEMPERATURE RANGE, -55°C TO $+125^\circ\text{C}$.
PULL STRENGTH TO 10.0 LBS. [44.5 N].
- ATTENUATION FORMULAS:**
8A. CALCULATE AT 26.5 GHz
(dB) = 1.80 dB/FT. X L(ft.)+.39 dB
8B. CALCULATE AT 40.0 GHz
(dB) = 2.25 dB/FT. X L(ft.)+.59 dB

HUBER+SUHNER Astrolab PART NUMBER	DIMENSION "L"	2.0 GHz		18.0 GHz		26.5 GHz		40.0 GHz	
		VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB
microbend KMR-2.5	2.50 (63.5)	1.20:1	0.23	1.40:1	0.62	1.50:1	0.77	1.60:1	1.06
microbend KMR-3	3.00 (76.2)	1.20:1	0.25	1.40:1	0.68	1.50:1	0.85	1.60:1	1.15
microbend KMR-3.5	3.50 (88.9)	1.20:1	0.27	1.40:1	0.74	1.50:1	0.92	1.60:1	1.25
microbend KMR-4	4.00 (101.6)	1.20:1	0.29	1.40:1	0.80	1.50:1	1.00	1.60:1	1.34
microbend KMR-4.5	4.50 (114.3)	1.20:1	0.31	1.40:1	0.86	1.50:1	1.07	1.60:1	1.43
microbend KMR-5	5.00 (127.0)	1.20:1	0.33	1.40:1	0.92	1.50:1	1.15	1.60:1	1.53
microbend KMR-5.5	5.50 (139.7)	1.20:1	0.35	1.40:1	0.98	1.50:1	1.22	1.60:1	1.62
microbend KMR-6	6.00 (152.4)	1.20:1	.037	1.40:1	1.05	1.50:1	1.30	1.60:1	1.72
microbend KMR-7	7.00 (177.8)	1.20:1	0.40	1.40:1	1.17	1.50:1	1.44	1.60:1	1.90
microbend KMR-8	8.00 (203.2)	1.20:1	0.44	1.40:1	1.29	1.50:1	1.59	1.60:1	2.09
microbend KMR-9	9.00 (228.6)	1.20:1	0.48	1.40:1	1.41	1.50:1	1.74	1.60:1	2.28
microbend KMR-10	10.00 (254.0)	1.20:1	0.52	1.40:1	1.53	1.50:1	1.89	1.60:1	2.47
microbend KMR-11	11.00 (279.4)	1.20:1	0.55	1.40:1	1.65	1.50:1	2.04	1.60:1	2.65
microbend KMR-12	12.00 (304.8)	1.20:1	0.59	1.40:1	1.77	1.50:1	2.19	1.60:1	2.84
microbend KMR-		1.20:1		1.40:1		1.50:1		1.60:1	

SEE NOTE 8

UNLESS OTHERWISE SPECIFIED
CONCENTRICITY .004 T.I.R.
CORNERS AND FILLETS .005
MAX. RADIUS OR CHAMFER.
SURFACE FINISH 63 RMS
MICROINCHES OR BETTER.

FRACTIONS	$\pm 1/16$
X	$\pm .030$
XX	$\pm .015$
XXX	$\pm .005$
ANGLES	$\pm 1^\circ$
DO NOT SCALE DRAWING	

NAME	DATE
PREP. EF	09/04/03
ELEC. RF	09/04/03
MECH. GSG	09/04/03
Q.C.	

HUBER+SUHNER
Astrolab

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TITLE
CABLE ASSEMBLY, 2.9mm PLUG TO SMPM FEMALE, RUGGEDIZED

ROHS 6 COMPLIANT

K	ECN No. 15606	06/10/13	EB	
REV.	DESCRIPTION	DATE	BY	APPROVED

THDS. TO BE IN ACCORD WITH U.S. DEPT. OF COMM. SCREW THD. STDS. FOR FEDERAL SERVICES 1950 SUPL. TO HANDBOOK H 28.	SCALE 2:1	CODE IDENT. 16301	DWG NO. microbend KMR-XX	REV K
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