Astrolab Minibend L

High performance, low loss, phase stable, true flexible cable

also available as an 'R' ruggedized assembly

The low loss version of the original minibend®

Product Description

minibend® L is an enhanced, low loss version of the minibend flexible coaxial cable assembly which is designed for use in low profile, internal, point-to-point interconnections between RF modules within communications systems. minibend® L replaces small custom semi-rigid cable with standard flexible cables eliminating the need for predefined custom lengths and bend configurations. minibend® L provides you with a preassembled and tested high performance, cost effective alternative in a variety of standard lengths.

Product Features

- Microporous dielectric for insertion loss lower than .086" semi-rigid cable.
- Precision stainless steel SMA plug connectors (Patented - US Patent Office)
- Stock delivery on standard lengths
- 99.9% lead free
- Eliminates need for costly right angle connectors
- Guaranteed 15 lbs. pull force
- Triple shielded for high isolation
- Frequency range up to 26.5 GHz
- Low Cost

Also available in LA (with SSMA plug connectors, 26.5 GHz), LS (with SMA plug/SMP socket connectors, 18 GHz) and L2S (with SMP socket connectors, 18 GHz) versions.

Environmental Limits:

Temperature Range: -55°C to +165°C
Thermal Shock: per Mil-Std-202, Method 107, Test Cond. A
Vibration: per Mil-Std-202, Method 214, Test Cond. B
Shock: per Mil-Std-202, Method 213, Test Cond. A, 40Gs

Phase Versus Flexure Reference Data

Astrolab performed phase tests on hundreds of minibend cable assemblies. Following are two standard Astrolab tests with the corresponding data. In test one minibend® L-6 assembly's were flexed 90° in a 0.25 inch radius directly behind the connector. In test two, minibend® L-16 assemblies were flexed 180° with a 0.4 inch radius in the middle. Typical data is recorded here:

	TEST ONE	TEST TWO
26.5 GHz.	1.3°	0.8°
18 GHz.	0.9°	0.7°
12.4 GHz.	0.7°	0.4°
1 GHz.	0.1°	0.1°

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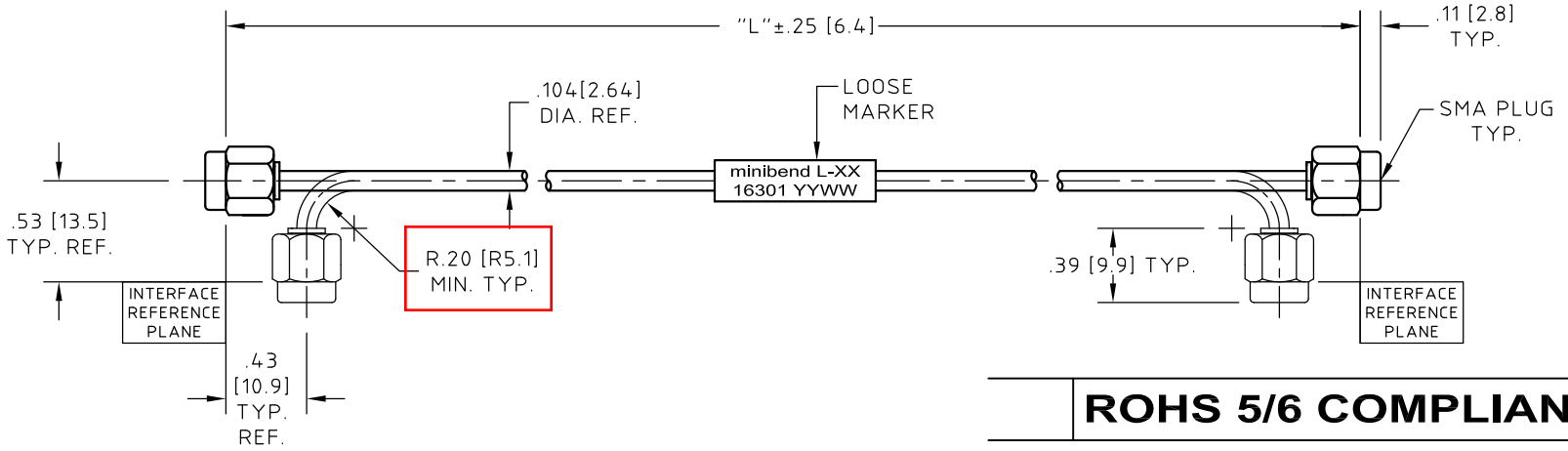
CONTROL DRAWING

minibend L-xx

Z



ROHS 5/6 COMPLIANT

HUBER+SUHNER Astrolab PART NUMBER	DIMENSION "L"	1.0 GHz		12.4 GHz		18.0 GHz		26.5 GHz	
		VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB
minibend L-2.5	2.50 [63.5]	1.16:1	0.13	1.25:1	0.33	1.35:1	0.44	1.40:1	0.54
minibend L-3	3.00 [76.2]	1.16:1	0.14	1.25:1	0.36	1.35:1	0.47	1.40:1	0.58
minibend L-3.5	3.50 [88.9]	1.16:1	0.15	1.25:1	0.39	1.35:1	0.51	1.40:1	0.63
minibend L-4	4.00 [101.6]	1.16:1	0.16	1.25:1	0.42	1.35:1	0.54	1.40:1	0.67
minibend L-4.5	4.50 [114.3]	1.16:1	0.17	1.25:1	0.45	1.35:1	0.58	1.40:1	0.72
minibend L-5	5.00 [127.0]	1.16:1	0.18	1.25:1	0.48	1.35:1	0.62	1.40:1	0.76
minibend L-5.5	5.50 [139.7]	1.16:1	0.19	1.25:1	0.51	1.35:1	0.65	1.40:1	0.80
minibend L-6	6.00 [152.4]	1.16:1	0.20	1.25:1	0.54	1.35:1	0.69	1.40:1	0.85
minibend L-6.5	6.50 [165.1]	1.16:1	0.21	1.25:1	0.57	1.35:1	0.72	1.40:1	0.89
minibend L-7	7.00 [177.8]	1.16:1	0.22	1.25:1	0.60	1.35:1	0.76	1.40:1	0.94
minibend L-7.5	7.50 [190.5]	1.16:1	0.24	1.25:1	0.63	1.35:1	0.80	1.40:1	0.99
minibend L-8	8.00 [203.2]	1.16:1	0.25	1.25:1	0.66	1.35:1	0.84	1.40:1	1.03
minibend L-8.5	8.50 [215.9]	1.16:1	0.26	1.25:1	0.70	1.35:1	0.88	1.40:1	1.08
minibend L-9	9.00 [228.6]	1.16:1	0.26	1.25:1	0.73	1.35:1	0.91	1.40:1	1.12
minibend L-9.5	9.50 [241.3]	1.16:1	0.27	1.25:1	0.76	1.35:1	0.95	1.40:1	1.17
minibend L-10	10.00 [254.0]	1.16:1	0.28	1.25:1	0.79	1.35:1	0.98	1.40:1	1.21
minibend L-11	11.00 [279.4]	1.16:1	0.30	1.25:1	0.85	1.35:1	1.06	1.40:1	1.30
minibend L-12	12.00 [304.8]	1.16:1	0.31	1.25:1	0.91	1.35:1	1.13	1.40:1	1.39
minibend L-13	13.00 [330.2]	1.16:1	0.33	1.25:1	0.97	1.35:1	1.20	1.40:1	1.48
minibend L-13.5	13.50 [342.9]	1.16:1	0.34	1.25:1	1.00	1.35:1	1.24	1.40:1	1.53
minibend L-14	14.00 [355.6]	1.16:1	0.35	1.25:1	1.03	1.35:1	1.28	1.40:1	1.57
minibend L-15	15.00 [381.0]	1.16:1	0.37	1.25:1	1.10	1.35:1	1.35	1.40:1	1.66
minibend L-16	16.00 [406.4]	1.16:1	0.39	1.25:1	1.17	1.35:1	1.42	1.40:1	1.75
minibend L-		1.16:1		1.25:1		1.35:1		1.40:1	

SEE NOTE 8

NOTES:

1. DESCRIPTION,
   CABLE ASSEMBLY, SMA PLUG TO SMA PLUG.

2. CABLE,
   COAXIAL CABLE HUBER+SUHNER Astrolab P/N 32024
   MEETS OR EXCEEDS MIL-DTL-17.
   SEE HUBER+SUHNER Astrolab CONTROL DRAWING
   FOR MATERIALS AND FINISHES.

3. CONNECTOR -A-, SMA PLUG:
   HUBER+SUHNER Astrolab P/N 29094C-32-24
   INTERFACE DIMENSIONS IAW MIL-STD-348.
   SEE HUBER+SUHNER Astrolab CONTROL DRAWING
   FOR MATERIALS AND FINISHES.

4. CONNECTOR -B-, SMA PLUG:
   SAME AS CONNECTOR -A-.

NOTES CONTINUED:

5. MARKING:
   LOOSE FITTING, WHITE SLEEVING CAPTIVATED
   ON THE CABLE ASSEMBLY.
   MARKING INCLUDES HUBER+SUHNER Astrolab
   PART NUMBER, CAGE CODE AND DATE
   CODE FOR DATE OF MANUFACTURE.
   OTHER MARKING AS DEFINED BY CUSTOMER.
   NO MARKING ON CABLE ASSEMBLIES SHORTER
   THAN 3.00 [76.2].
   MARKING ON PACKAGING ONLY.

6. ELECTRICAL CHARACTERISTICS:
   IMPEDANCE,
   50.0 Ohms NOMINAL.
   FREQUENCY, INSERTION LOSS AND VSWR
   SEE CHART.

7. MECHANICAL:
   OPERATING TEMPERATURE RANGE,
   -55° C TO +125° C.
   PULL STRENGTH TO 15.0 LBS. [66.7 N].

8. ATTENUATION FORMULAS:
   8A. CALCULATE AT 18.0 GHz
   (dB) = .88 dB/FT. X L(ft.)+.25 dB
   8B. CALCULATE AT 26.5 GHz
   (dB) = 1.08 dB/FT. X L(ft.)+.31 dB

	NAME	DATE
PREP.	GSG	08/11/98
ELEC.	RF	08/12/98
MECH.	GSG	08/12/98
Q.C.		

HUBER+SUHNER Astrolab

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

FRACTIONS	± 1/16
X	± .030
XX	± .015
XXX	± .005
ANGLES	± 1°

DO NOT SCALE DRAWING

TITLE
CABLE ASSEMBLY, minibend L TYPE, SMA PLUG TO SMA PLUG.

THDS. TO BE IN ACCORD WITH U.S. DEPT. OF COMM. SCREW THD. STDS. FOR FEDERAL SERVICES 1950 SUPL. TO HANDBOOK H 28.

SCALE	CODE IDENT.	DWG NO.	REV
1:1	16301	minibend L-xx	Z

REV.	DESCRIPTION	DATE	BY	APPROVED
Z	ECN No. 15523	05/09/13	EB	