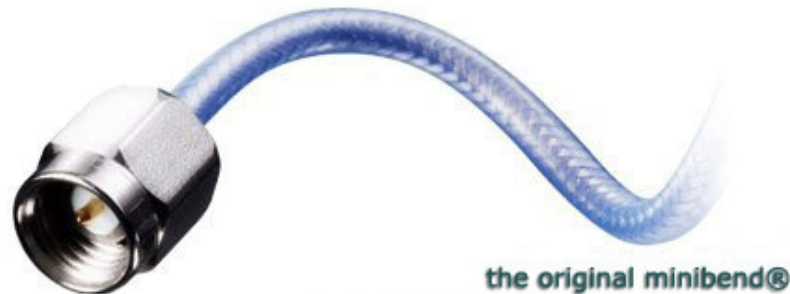


Astrolab original minibend

High performance, low profile

available as an 'R' ruggedized assembly



Product Description

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

Product Features

- Direct replacement for .086" semi-rigid cable
- Precision stainless steel SMA plug connectors (Patented - US Patent Office)
- Stock delivery on standard lengths
- Eliminates need for costly right angle connectors
- Guaranteed 15 lbs. pull force
- Triple shielded for high isolation
- Frequency range up to 24 GHz
- Low Cost
- 99.9% lead free

Environmental Limits

Temperature Range: -45°C to +85°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-6 assembly's were flexed 90° in a 0.25 inch radius directly behind the connector. In test two, minibend-16 assembly's were flexed 180° with a 0.4 inch radius in the middle. Typical data is listed here:

	TEST ONE	TEST TWO
24 GHz.	1.4°	3.9°
18 GHz.	1.2°	2.9°
12.4 GHz.	0.9°	1.8°
1 GHz.	0.1°	0.2°

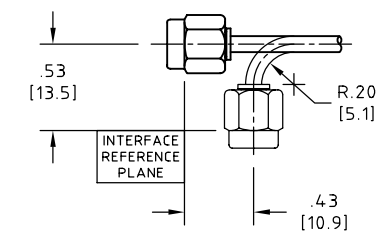
ASSEMBLY NO.	REF. NO.	DIM. "L"	2.0 GHz		12.4 GHz		18 GHz		24 GHz	
			VSWR	LOSS, dB	VSWR	LOSS, dB	VSWR	LOSS, dB	VSWR	LOSS, dB
minibend-2	32081-2-29094C-2	2.00 (50.8)	1.20	0.16	1.25	0.32	1.37	0.46	1.45	0.53
minibend-2.5	32081-2-29094C-2.5	2.50 (63.5)	1.20	0.18	1.25	0.36	1.37	0.50	1.45	0.57
minibend-3	32081-2-29094C-3	3.00 (76.2)	1.20	0.19	1.25	0.40	1.37	0.55	1.45	0.64
minibend-3.5	32081-2-29094C-3.5	3.50 (88.9)	1.20	0.21	1.25	0.44	1.37	0.60	1.45	0.70
minibend-4	32081-2-29094C-4	4.00 (101.6)	1.20	0.23	1.25	0.48	1.37	0.65	1.45	0.75
minibend-4.5	32081-2-29094C-4.5	4.50 (114.3)	1.20	0.24	1.25	0.54	1.37	0.70	1.45	0.82
minibend-5	32081-2-29094C-5	5.00 (127.0)	1.20	0.26	1.25	0.57	1.37	0.75	1.45	0.87
minibend-5.5	32081-2-29094C-5.5	5.50 (139.7)	1.20	0.27	1.25	0.62	1.37	0.80	1.45	0.93
minibend-6	32081-2-29094C-6	6.00 (152.4)	1.20	0.29	1.25	0.65	1.37	0.85	1.45	0.99
minibend-6.5	32081-2-29094C-6.5	6.50 (165.1)	1.20	0.30	1.25	0.70	1.37	0.90	1.45	1.04
minibend-7	32081-2-29094C-7	7.00 (177.8)	1.20	0.32	1.25	0.74	1.37	0.95	1.45	1.10
minibend-7.5	32081-2-29094C-7.5	7.50 (190.5)	1.20	0.34	1.25	0.78	1.37	1.00	1.45	1.16
minibend-8	32081-2-29094C-8	8.00 (203.2)	1.20	0.35	1.25	0.82	1.37	1.05	1.45	1.22
minibend-9	32081-2-29094C-9	9.00 (228.6)	1.20	0.38	1.25	0.91	1.37	1.15	1.45	1.35
minibend-10	32081-2-29094C-10	10.00 (254.0)	1.20	0.41	1.25	0.98	1.37	1.24	1.45	1.46
minibend-10.5	32081-2-29094C-10.5	10.50 (266.7)	1.20	0.43	1.25	1.03	1.37	1.29	1.45	1.52
minibend-11	32081-2-29094C-11	11.00 (279.4)	1.20	0.44	1.25	1.07	1.37	1.34	1.45	1.58
minibend-12	32081-2-29094C-12	12.00 (304.8)	1.20	0.47	1.25	1.15	1.37	1.42	1.45	1.68
minibend-13	32081-2-29094C-13	13.00 (330.2)	1.20	0.50	1.25	1.23	1.37	1.53	1.45	1.81
minibend-14	32081-2-29094C-14	14.00 (355.6)	1.20	0.53	1.25	1.30	1.37	1.62	1.45	1.92
minibend-15	32081-2-29094C-15	15.00 (381.0)	1.20	0.57	1.25	1.40	1.37	1.73	1.45	2.04
minibend-16	32081-2-29094C-16	16.00 (406.4)	1.20	0.60	1.25	1.47	1.37	1.82	1.45	2.15
minibend-	32081-2-29094C-									

CONTROL DRAWING

minibend-XX

AF

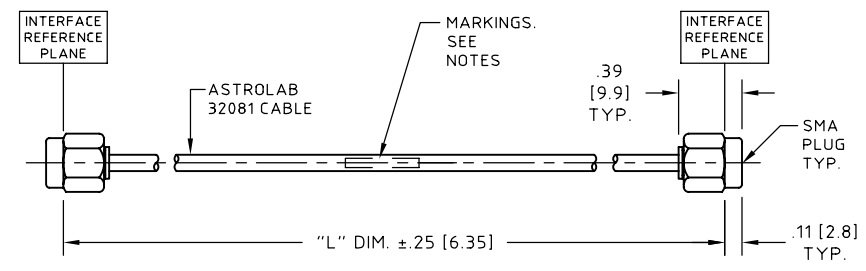
ALL minibend CABLE ASSEMBLIES ARE 99.9% LEAD FREE BY WEIGHT.



SHOWN ABOVE IS TYPICAL INSTALLATION.

NOTES:

- CABLE (EXCEEDS MIL-DTL-17):
 INNER CONDUCTOR: SILVER PLATED OFHC SOLID COPPER WIRE.
 DIELECTRIC: PTFE PER ASTM D-1710 OR ASTM D-4894.
 INNER BRAID: SILVER PLATED OFHC FLAT COPPER WIRE BRAID.
 BARRIER LAYER: POLYIMIDE/ALUMINUM TAPE.
 OUTER BRAID: 30% STAINLESS STEEL WIRE BRAID.
 OUTER JACKET: EXTRUDED FEP PER L-P-389.
- CONNECTORS MEET MIL-PRF-39012:
 BODIES, NUTS AND BACKNUTS:
 STEEL, CORROSION RESISTANT PER ASTM A-582,
 UNS No. S30300, COND. A, NON MAGNETIC,
 PASSIVATED PER SAE-AMS-2700 OR ASTM A-967.
 NO DICHROMATE SOLUTIONS USED.
 BACKNUT IS NICKEL ALLOY PLATED.
 CENTER CONDUCTOR:
 BERYLLIUM COPPER ALLOY PER ASTM B-196,
 UNS No. C17300, TEMPER TD04(H).
 GOLD PLATED .000050 IN MIN. THK. (1.27 MICRO METERS)
 PER ASTM B-488, CODE C, TYPE II
 OVER:
 NICKEL PLATE, .000050 IN MIN. THK. PER SAE-AMS-QQ-N-290,
 CLASS 1 OR ASTM B-689.
 DIELECTRIC:
 POLYTETRAFLUOROETHYLENE (PTFE) PER ASTM D-1710
 OR ASTM D-4894, TYPE I, GRADE 1.
- ELECTRICAL CHARACTERISTICS (SEE MAXIMUM VALUES IN CHART).
- TECHNICAL DATA:
 OPERATING TEMPERATURE: -45°C TO +85°C.
 PULL STRENGTH TO 15 LBS.
- MARKING APPROXIMATELY CENTERED DIRECTLY ON CABLE AS FOLLOWS:
 "minibend-XX YYWW"
 WHERE "XX" DENOTES THE LENGTH OF THE CABLE ASSEMBLY, AND "YYWW"
 THE DATE CODE, YEAR AND WEEK DETERMINED BY PRODUCTION DATE.
 NO MARKING ON CABLE ASSEMBLIES "minibend-2.0" OR SHORTER.
 MARKING ON PACKING ONLY.



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	

NAME	DATE
PREP. M. KEATING	11/07/95
ELEC.	
MECH.	
Q.C.	

ASTROLAB® INC.
 WARREN, NJ
 THIS DRAWING CONTAINS PATENTABLE AND PROPRIETARY INFORMATION. THE DESIGN CANNOT BE USED WITHOUT WRITTEN PERMISSION OF ASTROLAB

CABLE ASSEMBLY, SMA PLUG TO SMA PLUG

AF	ECN No. 10945	09/01/06	EB							
REV.	DESCRIPTION	DATE	BY	APPROVED						
						THDS. TO BE IN ACCORD WITH U.S. DEPT. OF COMM. SCREW THD. STDS. FOR FEDERAL SERVICES 1950 SUPPL. TO HANDBOOK H 28.	SCALE 1:1	CODE IDENT. 16301	DWG NO. minibend-XX	REV AF