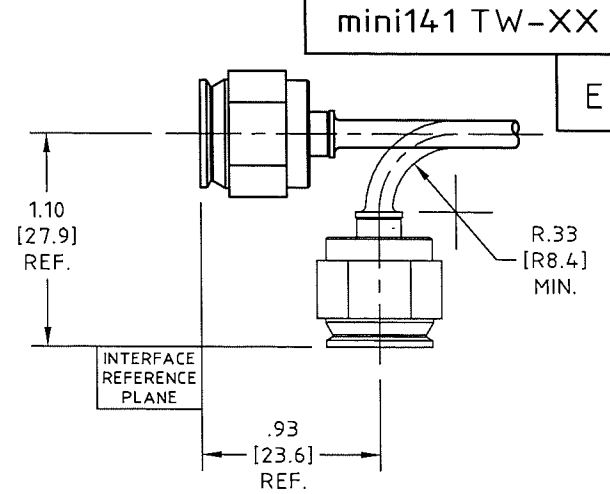
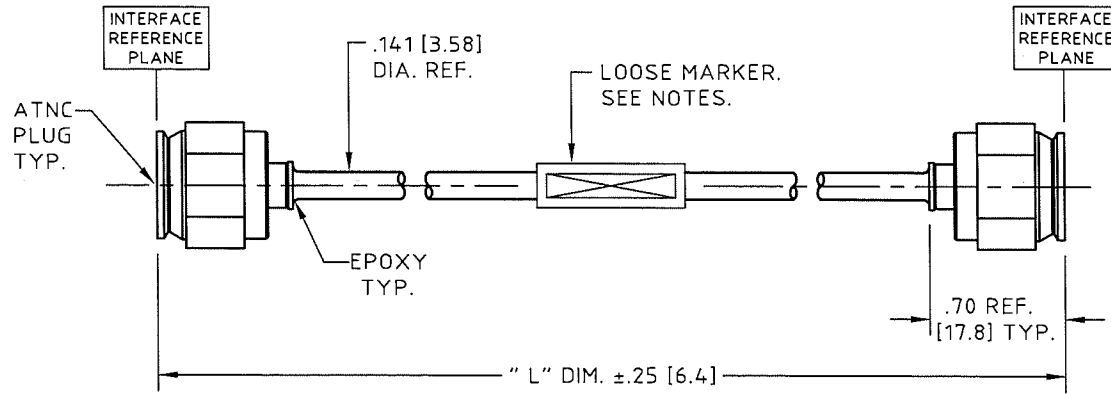


# CONTROL DRAWING



SHOWN ABOVE IS TYPICAL INSTALLATION

NOTES:  
1. DESCRIPTION,  
CABLE ASSEMBLY, ATNC (TNCA) PLUG  
TO ATNC (TNCA) PLUG.

2. CABLE,  
COAXIAL CABLE H+S Astrolab P/N 32022E  
MEETS OR EXCEEDS MIL-DTL-17  
SEE H+S Astrolab CONTROL DRAWING  
FOR MATERIALS AND FINISHES.
3. CONNECTOR -A-, ATNC PLUG:  
H+S Astrolab P/N 29882WR-32-22  
ATNC PLUG CONNECTOR MATES WITH  
TNCA JACK THAT IS IAW MIL-STD-348.  
SEE H+S Astrolab CONTROL DRAWING  
FOR MATERIALS AND FINISHES.
4. CONNECTOR -B-, ATNC PLUG:  
SAME AS CONNECTOR -A-.
5. MARKING:  
LOOSE, WHITE SLEEVING CAPTIVATED  
ON THE CABLE ASSEMBLY.  
MARKING WILL INCLUDE THE H+S Astrolab  
PART NUMBER, CAGE CODE  
AND DATE CODE OF DATE OF  
MANUFACTURE.  
OTHER MARKING AS DEFINED BY CUSTOMER.  
NO MARKING ON CABLE ASSEMBLIES SHORTER  
THAN 3.0", MARKING ON PACKING ONLY..

NOTES CONTINUED:

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.
8. ENVIRONMENTAL LIMITS:  
TEMPERATURE / HUMIDITY RANGE,  
-45°C TO 85°C / FROM 0 TO 100% RH  
MOISTURE RESISTANCE, PER MIL-STD-202,  
METHOD 106.  
THERMAL SHOCK, PER MIL-STD-202,  
METHOD 107, TEST CONDITION A  
VIBRATION, PER MIL-STD-202, METHOD 214,  
TEST CONDITION B  
SHOCK, PER MIL-STD-202, METHOD 213,  
TEST CONDITION A, 40Gs  
PULL STRENGTH TO 25 Lbs [111 N].

H+S Astrolab PART NUMBER	DIMENSION "L" IN	2.0 GHz		12.4 GHz		18.5 GHz	
		VSWR	IL, dB	VSWR	IL, dB	VSWR	IL, dB
mini141 TW-4	4.00 [101.6]	1.25:1	0.18	1.29:1	0.37	1.40:1	0.57
mini141 TW-4.5	4.50 [114.3]	1.25:1	0.19	1.29:1	0.39	1.40:1	0.59
mini141 TW-5	5.00 [127.0]	1.25:1	0.20	1.29:1	0.41	1.40:1	0.62
mini141 TW-5.5	5.50 [139.7]	1.25:1	0.20	1.29:1	0.43	1.40:1	0.64
mini141 TW-6	6.00 [152.4]	1.25:1	0.21	1.29:1	0.45	1.40:1	0.67
mini141 TW-6.5	6.50 [165.1]	1.25:1	0.22	1.29:1	0.47	1.40:1	0.69
mini141 TW-7	7.00 [177.8]	1.25:1	0.23	1.29:1	0.49	1.40:1	0.71
mini141 TW-8	8.00 [203.2]	1.25:1	0.24	1.29:1	0.53	1.40:1	0.76
mini141 TW-9	9.00 [228.6]	1.25:1	0.26	1.29:1	0.57	1.40:1	0.81
mini141 TW-10	10.00 [254.0]	1.25:1	0.27	1.29:1	0.60	1.40:1	0.86
mini141 TW-11	11.00 [279.4]	1.25:1	0.29	1.29:1	0.64	1.40:1	0.90
mini141 TW-12	12.00 [304.8]	1.25:1	0.30	1.29:1	0.68	1.40:1	0.95
mini141 TW-13	13.00 [330.2]	1.25:1	0.32	1.29:1	0.72	1.40:1	1.00
mini141 TW-14	14.00 [355.6]	1.25:1	0.33	1.29:1	0.76	1.40:1	1.05
mini141 TW-15	15.00 [381.0]	1.25:1	0.35	1.29:1	0.80	1.40:1	1.09
mini141 TW-16	16.00 [406.4]	1.25:1	0.36	1.29:1	0.83	1.40:1	1.14
mini141 TW-							

**ROHS 5/6 COMPLIANT**

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.	EF	08/28/03
ELEC.	RF	09/04/03
MECH.	GSG	09/04/03
Q.C.	AG	09/05/03



THIS DRAWING CONTAINS PATENTABLE AND PROPRIETARY  
INFORMATION. THE DESIGN CANNOT BE USED WITHOUT  
WRITTEN PERMISSION OF HUBER + SUHNER ASTROLAB.

TITLE  
**CABLE ASSY, TYPE mini141, ATNC PLUG TO ATNC PLUG, WEATHERIZED.**

REV.	DESCRIPTION	DATE	BY	APPROVED	SCALE	CODE IDENT.	DWG NO.	REV
E	COMPANY LOGO UPDATE	01/15/13	ENG/EB	[Signature]	1:1	16301	mini141 TW-XX	E

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