

INCH-POUND

MIL-DTL-25708/1H  
w/AMENDMENT1  
7 January 2013  
SUPERSEDING  
MIL-DTL-25708/1H  
1 October 2012

DETAIL SPECIFICATION SHEET

ANTENNA, BLADE, AT-741B/B (HN CONNECTOR)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the antenna described herein shall consist of this specification sheet and MIL-DTL-25708.

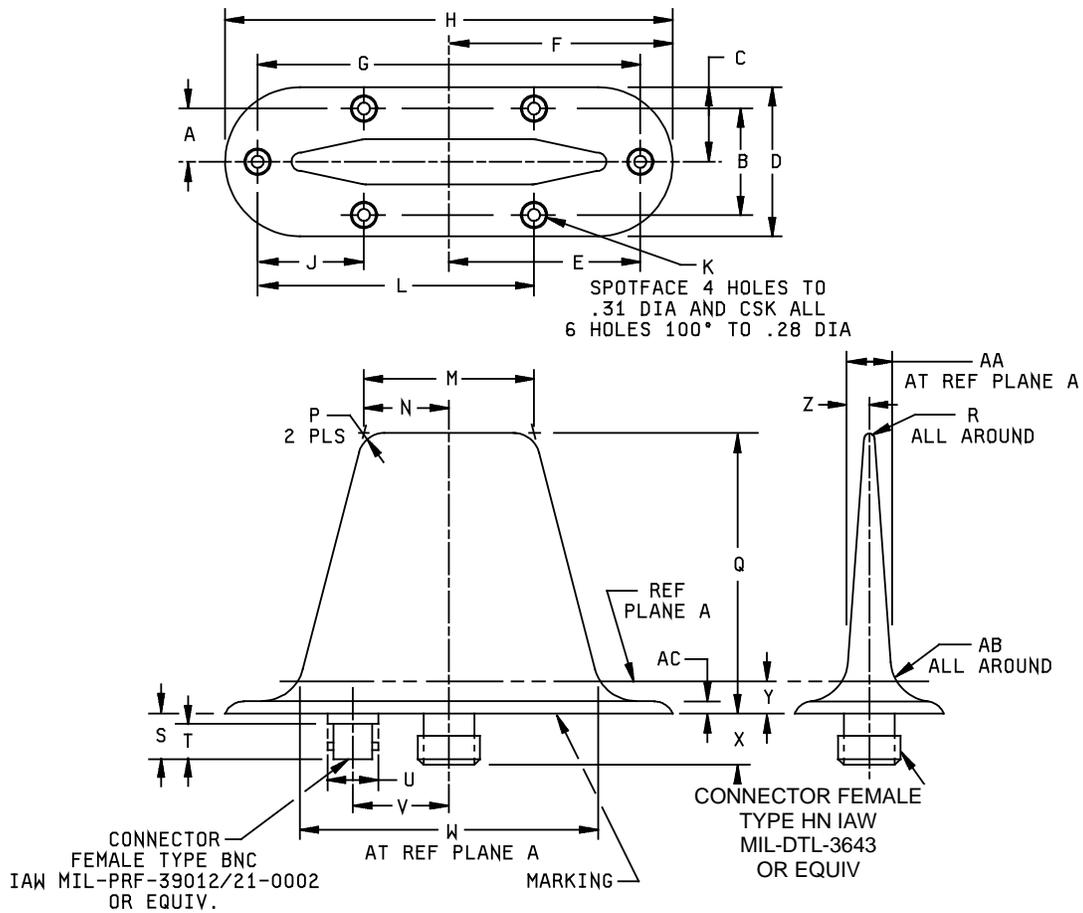


FIGURE 1. Outline drawing antenna AT-741B/B.

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Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
A	.615	.635	15.62	16.13
B	1.240	1.260	31.50	32.00
C	.85	.91	21.6	23.1
D	1.72	1.78	43.7	45.2
E	2.230	2.270	56.64	57.66
F	2.59	2.65	65.8	67.3
G	4.490	4.510	114.0	114.6
H	5.22	5.28	132.6	134.1
J	1.245	1.255	31.62	31.88
K	.143 dia	.149 dia	3.63 dia	3.78 dia
L	3.245	3.255	82.42	82.68
M	---	2.00	---	50.8
N	---	1.00	---	25.4
P	.31 R ref		7.9 R ref	
Q	---	3.32	---	84.3
R	.06 R	.09 R	1.5 R	2.3 R
S	---	.534	---	13.56
T	.414	---	10.52	---
U	---	.598	---	15.19
V	1.11	1.15	28.2	29.2
W	---	3.75	---	95.2
X	---	.60	---	15.2
Y	.35	---	8.9	---
Z	---	.266	---	6.76
AA	---	.532	---	13.51
AB	.50 R ref		12.7 R ref	
AC	.12	.15	3.1	3.8

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. The base of the antenna is considered that part that rises from the bottom of the antenna mounting surface to the reference plane "A". Must be not less than .350 inch (8.89 mm). The cover is that part above reference plane "A".
4. Unless otherwise specified, tolerances are  $\pm .005$  inch (.13 mm) for three place decimals and tolerances are  $\pm .02$  inch (.51 mm) for two place decimals.

FIGURE 1. Outline drawing antenna AT-741B/B - Continued.

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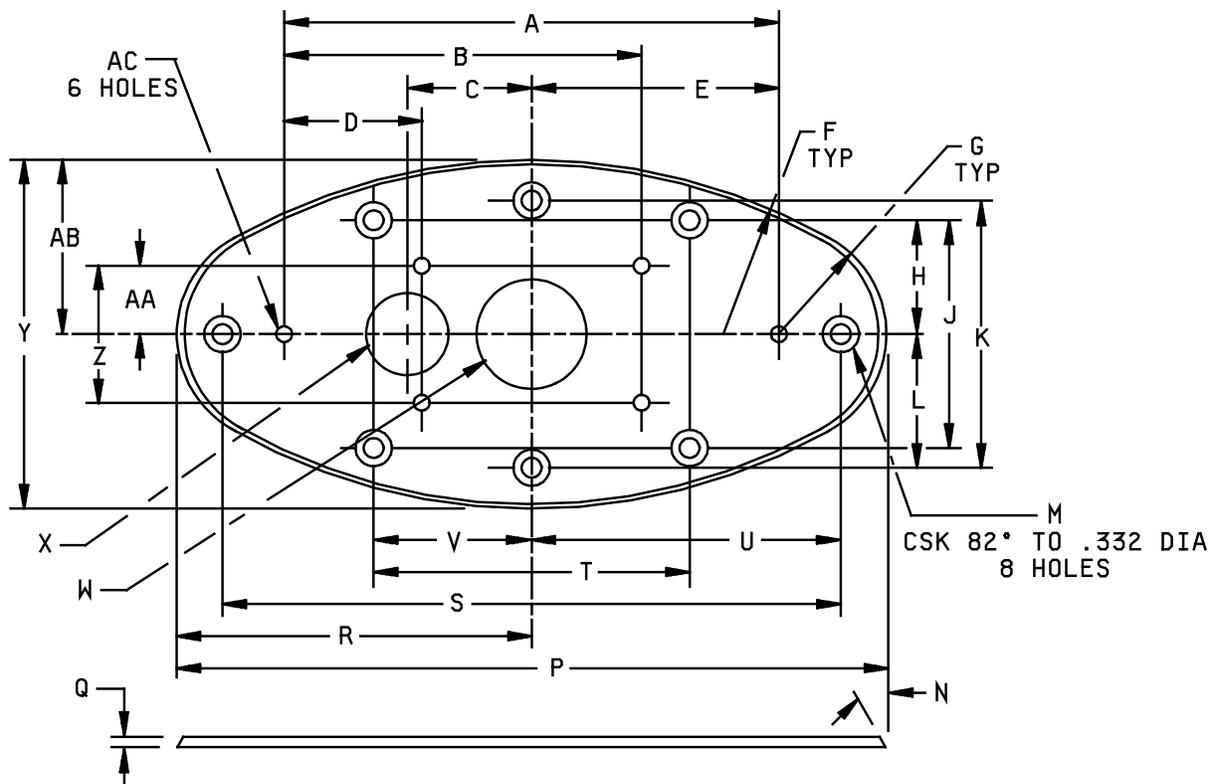


FIGURE 2. Adapter plate P/N M25708/1-02 and M25708/1-03.

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Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
A	4.495	4.505	114.17	114.43
B	3.245	3.255	82.42	82.68
C	1.12	1.14	28.5	29.0
D	1.245	1.255	31.62	31.88
E	2.245	2.255	57.02	57.28
F	5.49 R	5.51 R	139.5 R	140.0 R
G	.99 R	1.01 R	25.1 R	25.7 R
H	1.034	1.044	26.26	26.52
J	2.073	2.083	52.65	52.91
K	2.432	2.442	61.77	62.03
L	1.213	1.223	30.81	31.06
M	.179 dia thru	.185 dia thru	4.55 dia thru	4.70 dia thru
N	25°	35°	25°	35°
P	6.43	6.45	163.3	163.8
Q	.0902	.0912	2.291	2.316
R	3.21	3.23	81.5	82.0
S	5.620	5.630	142.75	143.00
T	2.870	2.880	72.90	73.15
U	2.807	2.817	71.30	71.55
V	1.432	1.442	36.37	36.63
W	.99 dia	1.01 dia	25.1 dia	25.7 dia
X	.74 dia	.76 dia	18.8 dia	19.3 dia
Y	3.18	3.20	80.8	81.3
Z	1.245	1.255	31.62	31.88
AA	.620	.630	15.75	16.00
AB	1.58	1.60	40.1	40.6
AC	.143 dia	.150 dia	3.63 dia	3.81 dia

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Unless otherwise specified, tolerances are  $\pm .005$  inch (.13 mm) for three place decimals and tolerances are  $\pm .02$  inch (.51 mm) for two place decimals.

FIGURE 2. Adapter plate P/N M25708/1-02 and M25708/1-03 - Continued.

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REQUIREMENTS (ANTENNA):

Dimensions and configuration: See figure 1.

Materials:

Base: Aluminum alloy in accordance with ASTM B85/B85M, alloy SC84B.

Cover: Suitable material that will resist erosion of impinging particles at velocities up to Mach 2.

Temperature operating range: -55°C to 149°C.

Static load: 15 psig.

Frequency range: 0.960 to 1.220 GHz.

Impedance: 50 ohms nominal.

VSWR:

Antenna: 1.40:1 maximum from 0.960 to 1.220 GHz.  
1.30:1 maximum from 1.000 to 1.100 GHz.

Sampling probe: 1.50:1 maximum from 0.960 to 1.220 GHz.

Power: 4 kW peak, 100 watts average.

Weight: 10 ounces maximum.

Part or Identifying Number (PIN): See table I.

Data list: A data list shall accompany each antenna with VSWR measurement values made at 0.960, 1.000, 1.100, and 1.200 GHz.

REQUIREMENTS (ADAPTER PLATE):

Dimensions and configuration: See figure 2.

Material: Aluminum alloy in accordance with SAE-AMS-QQ-A-250, Temp T4.

Finish: Anodize in accordance with MIL-A-8625, Type I, Class I.

TABLE I. PIN.

PIN	Description
M25708/1-01	AT-741B/B Antenna
M25708/1-02 <u>1/</u>	AT-741B/B Adapter (anodized)

1/ Inactive for new design. To be used to replace existing AS-133/APX and AT-722/APX antennas by using antenna AT-741B/B (M25708/1-01) and antenna adapter plate (M25708/1-02).

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TABLE II. Supersession data.

PIN	Replaces
M25708/1-01	AT-741B/A
M25708/1-01	AT-741A/A
M25708/1-01	AT-741/A
M25708/1-01 and M25708/1-02	AS-133/APX
M25708/1-01 and M25708/1-02	AT-722/APX

Referenced documents. In addition to MIL-DTL-25708, this document references the following:

MIL-DTL-3643  
MIL-PRF-39012/21  
MIL-A-8625  
SAE-AMS-QQ-A-250  
ASTM B85/B85M

The margins of this specification sheet are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:  
Army - CR  
Navy - AS  
Air Force - 85  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5985-2013-006)

Review activities:  
Army - AV  
Air Force - 71, 84, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.