

INCH-POUND

MIL-DTL-83517/12
w/AMENDMENT 1
21 April 2015
SUPERSEDING
MIL-DTL-83517/12
2 September 2005

DETAIL SPECIFICATION SHEET

CONNECTOR, RECEPTACLE, ELECTRICAL, COAXIAL, RADIO FREQUENCY,
STRIPLINE, SERIES BMA (PIN CONTACT), FLANGE MOUNTED,
EXTENDED DIELECTRIC

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

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-83517.

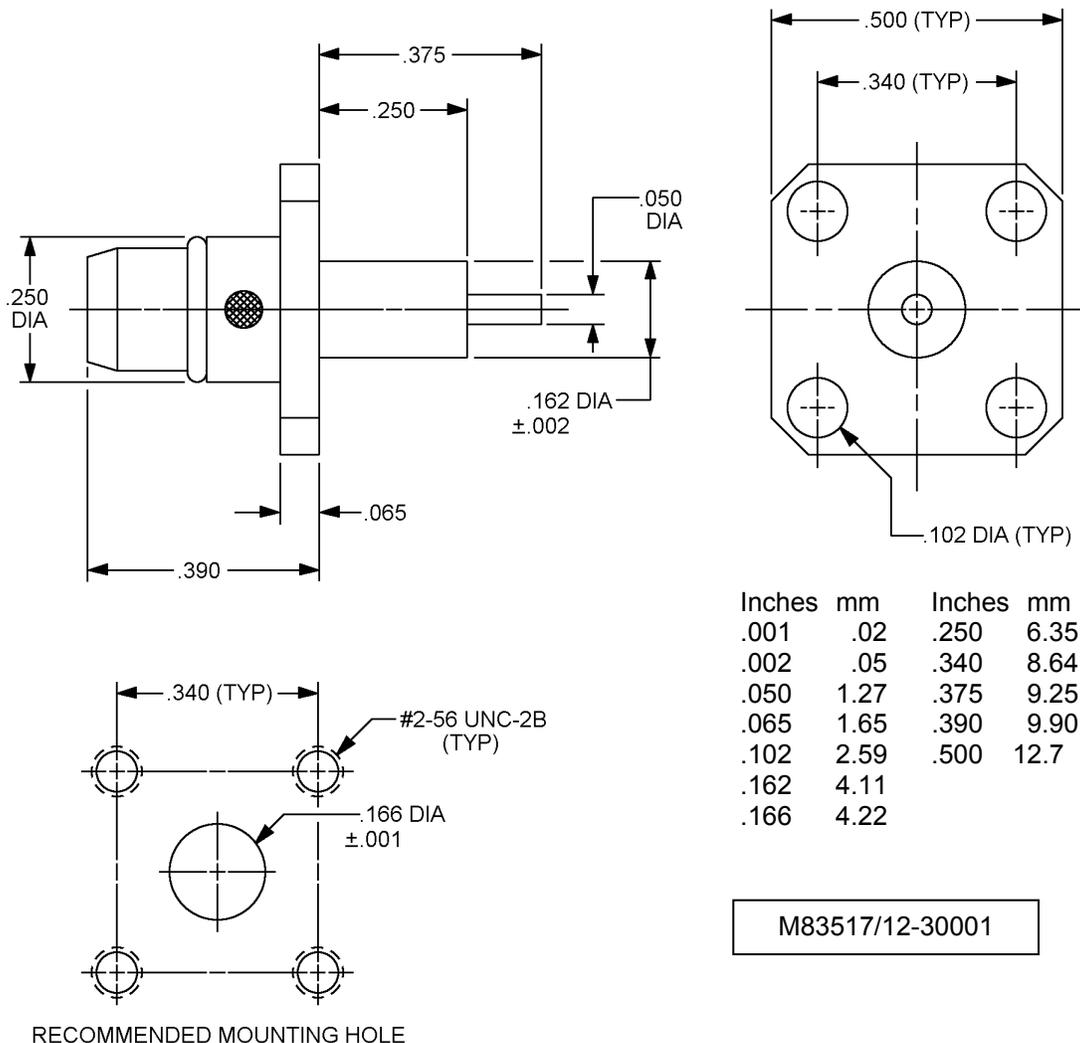


FIGURE 1. Series BMA, 4-hole flange mounted receptacle, .250 (6.35 mm) extended dielectric.

AMSC N/A

FSC 5935



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NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. All undimensioned pictorial configurations are for reference purposes only.
4. Number 2 screws are recommended for mounting.
5. Series BMA interface in accordance with MIL-STD-348, pin contact.
6. Unless otherwise specified tolerances are ± 0.005 inch (± 0.13 mm).

FIGURE 2. Series BMA 4-hole flange mount receptacle, .330 (8.38 mm) extended dielectric – Continued.

ENGINEERING PARAMETERS:

Nominal impedance: 50 ohms.

Voltage rating: 500 V rms.

Frequency range: DC to 22 GHz.

Temperature rating: -65° to 105°C .

REQUIREMENTS:

Design and construction: See figures 1, 2 and MIL-STD-348.

Force to engage and disengage:

Torque – Not applicable.

Longitudinal force – Not applicable.

Coupling proof torque: Not applicable.

Permeability: Not applicable.

Hermetic seal: Not applicable.

Leakage: Not applicable.

Insulation resistance: 5,000 megohms, minimum, in accordance with test procedure EIA/ECA-364-21.

Center contact retention:

Axial force: 6 lbs, minimum.

Torque: 4 inch-ounces, minimum.

Dielectric withstanding voltage: In accordance with test procedure EIA 364-20, test condition I.

Test voltage: 1,500 V rms.

Vibration, high frequency: MIL-STD-202, method 204, condition D.

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Corona level:

Altitude 70,000 feet: 375 V rms.

Shock: MIL-STD-202, method 213, condition I.

Corrosion: In accordance with test procedure EIA/ECA-364-26, test condition B.

Voltage standing wave ratio (VSWR):

1.05 +.01F (F in GHz), maximum. From .5 to 22 GHz.

RF transmission loss: $.07\sqrt{F}$ (F in GHz), tested 2 to 22 GHz.

RF leakage: Not applicable.

Connector durability: 500 cycles minimum, at 12 cycles per minute maximum. The connector shall meet the mating characteristics and force to engage and disengage requirements.

Contact resistance: In milliohms, maximum.

	<u>Initial</u>	<u>After environmental</u>
Center contact:	3.0	4.0
Outer contact:	2.0	N/A

Thermal shock: MIL-STD-202, test condition A, except the high temperature shall be +85°C.

Moisture resistance: MIL-STD-202, method 106.

No measurements at high humidity. Insulation resistance, except step 7b shall be omitted.

RF high potential withstanding voltage:

At a frequency between 5 to 7.5 MHz.

Leakage current: Not applicable.

RF voltage: 670 V rms.

Cable retention force: Not applicable.

RF leakage: Not applicable.

Barometric pressure (reduced): Not applicable.

Coupling mechanism retention force: Not applicable.

Qualification by similarity: See table I.

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TABLE I. Qualification by similarity.

Qualifying part	Qualifies the following parts
M83517/12-30001 M83517/12-30002	M83517/12-30001 M83517/12-30002

Part or Identifying Number (PIN): M83517/12-30001 or M83517/12-30002.

Amendment notations. The margins of this specification 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.

Referenced documents. In addition to MIL-DTL-83517, this document references to the following:

MIL-STD-202
MIL-STD-348
EIA 364-20
EIA/ECA-364-21
EIA/ECA-364-26

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – EC
Air Force – 85
DLA - CC

Preparing activity:
DLA – CC

(Project 5935-2015-142)

Review activities:

Army – AR, AT, CR4, MI
Navy – AS, MC, OS, SH
Air Force – 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/>.