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IN REPLY
REFER

DSCC-VAI (Mr. Ron Gary/(614) 692-0568

May 12, 2004

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Drafts of MIL-PRF-55339/1B, /3A through /25C, /32A through /39A and /49A through /51A; Adapter, Connectors, Coaxial, Radio Frequency, Various Series; Project Numbers 5935-4657-001 through -035.

The initial drafts for this subject documents will be available for viewing and downloading from the DSCC-VAI Web site within the next 5 working days:

<http://www.dsccl.dla.mil/Programs/MilSpec/initialdrafts.asp>

Changes to this document include new part number additions that allow for the use of Nickel plated adapter bodies, contact resistance values for the new plating and format up dates. However, the entire set of specification sheets are offered up for comment.

Concurrence or comments are required at this Center within 45 days from the date of this letter. Late comments will be held for the next coordination of this document. Comments from Military Departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians, as applicable, in sufficient time to allow for consolidation of the Department reply.

Please forward your comments or concurrence electronically to the project officer listed below. This can be in the form of a return e-mail, with or without attached text files. If an electronic response is not possible, we will accept comments via letter, facsimilie, or phone call. Any further coordination concerning this document will be circulated only to firms and organizations that furnish comments or reply that they have an interest.

The point of contact for this document is Mr. Ron Gary. The preferred method of contact is via e-mail: Estel.Gary@dla.mil. Mr. Gary can also be reached at 614-692-0568/DSN 850-0568, or by facsimilie 614-692-6940.

Sincerely,

/SIGNED/

RICHARD L. TAYLOR
Chief,
Interconnection Devices Team

Note: This draft dated 10 May 2004, prepared by the Defense Supply Center Columbus (DSCC-VAI) has not been approved and is subject to modification.

DO NOT USE FOR ACQUISITION PURPOSES

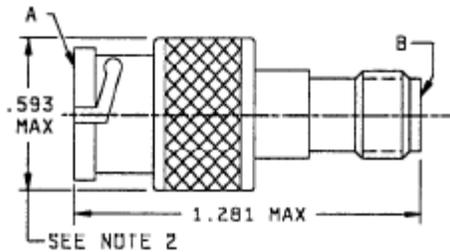
MIL-PRF-55339/38A
DRAFT
 SUPERSEDING
 MIL-PRF-55339/38
 11 January 1977

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY.
 (WITHIN SERIES BNC TO TNC), CLASS 2, STRAIGHT PLUG

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

The requirements for acquiring the adapter described herein shall consist of this specification sheet and MIL-PRF-55339.



Reference	Series	Contact
A	BNC	Pin
B	TNC	Socket

INCHES	MM
.381	9.68
.390	9.91
.593	15.06
1.281	32.54

NOTES:

1. Dimensions are in inches.
2. This dimension is the largest overall diameter of the connector.
3. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
4. Interface dimensions with in accordance with MIL-STD-348.

FIGURE 1. General configuration.

DESIGN AND CONSTRUCTION:

General configuration. See figure 1.

Impedance 50 ohms, nom.

Working voltage: Sea level – 500 Vrms.
70,000 feet – 125 Vrms

Frequency range: 0 to 4 GHz.

Temperature range: -65° to +165°C.

PERFORMANCE (installation torque is not applicable).

Dimensions – See figure 1 and MIL-STD-348.

Center contact retention: Axial force – 6 lb, min.
Torque – Not applicable.

	<u>BNC series</u>	<u>TNC series</u>
Force to engage and disengage: Longitudinal force	3 lb, max	Not applicable.
Torque	2 in. lbs max.	

Mating characteristics:

Center contact (socket) series TNC:

Oversize test pin dia - .057 in., min.

Insertion depth - .125 in., min.

No. of insertions - 1.

Max test pin (insertion force test):

Steel test pin dia - .054 in., min.

Pin finish – 16 microinches.

Insertion force – 2 lb, max.

No. of insertions – 1.

Min test pin (withdrawal force):

Steel test pin dia - .052 in., max

Pin finish – 16 microinches.

Withdrawal force – 2 oz, min.

No. of withdrawals – 1.

Outer contact Series BNC:

Min test ring ID - .319 in., max.

Pin finish – 16 microinches.

Insertion force – 5 lb, max.

Insertion depth - .093 in., min.

No. of insertions – 1.

Max test ring ID - .324 in., min.

Test ring finish – 16 microinches.

Insertion depth - .031 in., max. of their tip end.

No. of insertions – 1.

Permeability: < 2.0

Seal:

Pressurized – Not applicable.

Weatherproof – Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR 1.25, max at .5 to 4 GHz.

RF leakage (total): -55 dB, min, 2 to 3 GHz.

RF insertion loss: .2 dB, max, 3 GHz ($.115 \sqrt{F}$ (GHz) dB max tested at 3 GHz)

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

Dielectric withstanding: Test voltage – 1,500 Vrms, min (sea level).

Contact resistance (milliohms, max).

<u>Contact</u>	<u>Initial</u>	<u>After</u>
Center	2.0	2.5
Outer	0.2	N/A
Outer (-70001)	0.4	N/A

Vibration, high frequency: Interruptions – 1 μ s, max.

Shock: Test condition I.

Thermal shock: Test condition C.

Moisture resistance: 200 megohms, min.

Corona level: Voltage – 375 V, min.
Altitude - 70,000 feet, min.

RF high potential withstanding voltage: RF voltage – 1,000 Vrms. min.
Frequency – 5 MHz, min.

Salt spray (corrosion): Test condition B.

	<u>Series BNC</u>	<u>Series TNC</u>
Coupling mechanism retention force	100 lb, min	Not applicable

Part Identifying Number (PIN):. M55339/38-00001 or:

PIN: M55339/38-70001 **CAUTION: THIS PART HAS A NICKEL PLATED BODY AND IS NOT FOR USE IN APPLICATIONS WHERE PASSIVE INTERMODULATION GENERATION (PIM) MAY BE A CONCERN.**

Referenced documents.

- MIL-STD-348
- MIL-PRF-55339

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – EC
Air Force – 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-4657-031)

Review activities:

Army – AR, AT, EA, MI
Navy – AS, MC, OS, SH
Air Force – 19, 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 www.dodssp.daps.mil.