INCH-POUND

MIL-DTL-3933/31
10 August 2010

DETAIL SPECIFICATION SHEET

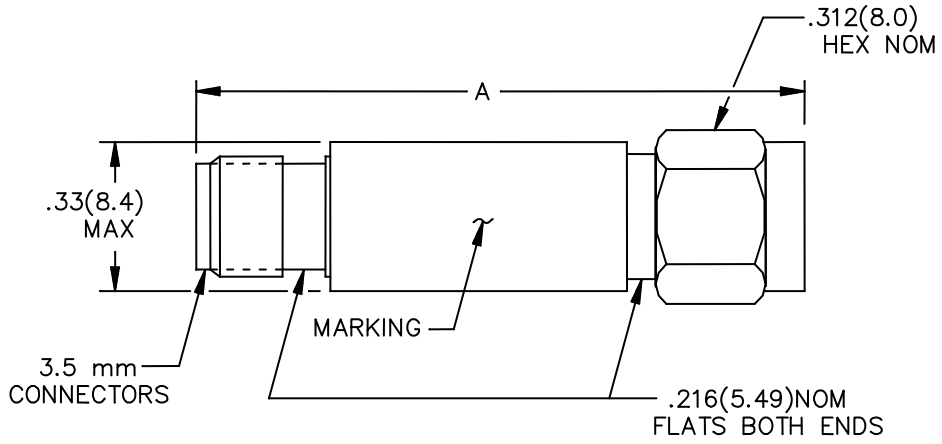
ATTENUATORS, FIXED COAXIAL CONNECTOR
SPACE LEVEL, NON SPACE LEVEL

TYPE 3.5 mm CONNECTOR

FREQUENCY RANGE: DC TO 28 GHz, CLASS III, LOW POWER

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-3933.



NOTES:
1. Dimension A, 1.30 ± 0.02 (33 ± 0.5).
2. Dimensions are in inches.
3. Metric equivalents are given in parentheses for general information only.

FIGURE 1. Dimensions and configuration.

ENGINEERING DATA:

Operating frequency range: DC to 28 gigahertz (GHz) (see table I).

Test frequency range for SWR and attenuation measurements, measured or recorded, when using an Automatic Network Analyzer (ANA) or equivalent test equipment: 100 MHz (or lower) to 14 GHz.

Basic test frequency for sensitive measurements like temperature sensitivity, power sensitivity, and any other measurements where a 'delta' specification is imposed: 14 GHz.

Operating temperature range: -55 °C to +100 °C

Weight: 0.30 ounces (8 g) maximum.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Nominal impedance: 50 ohms.

Attenuation: See table I. Stability and sensitivity:

Maximum attenuation change after:	**Up to 10 dB, inclusive (dB)**	**Over 10 dB (dB/dB)**
Temperature change/ thermal shock	0.05	0.005
Vibration or shock	0.1	0.01
Moisture resistance or salt spray	0.2	0.02
Peak power	0.05	0.005

Temperature sensitivity of attenuation, maximum: 0.0004 dB/dB/°C.

Power: See table I.

Power sensitivity for full input power, maximum: 0.004 dB/dB/Watt.

VSWR: See table I.

Part or Identifying Number (PIN): M3933/31- (and dash number from table I with three device level designators are space level (T), screened (S) and non-screened (N) options).

TABLE I. Electrical characteristics.

Dash Number	Attenuation (dB)		Maximum power Input		VSWR maximum 1/			Dimension A in inches (mm) ±0.02 (0.5)
	Nominal	Deviation DC to 28 GHz	AV (W) at 25°C 2/ (continuously)	Peak 3/ kW	DC to 8 GHz	8 to 12.4 GHz	12.4 to 28 GHz	
01 N S T	0	+0.5, - 0	2	0.5	1.10:1	1.15:1	1.25:1	1.30 (33)
02 N S T	3	± 0.60	2	0.5	1.10:1	1.15:1	1.25:1	1.30 (33)
03 N S T	6	± 0.60	2	0.5	1.10:1	1.15:1	1.25:1	1.30 (33)
04 N S T	10	± 0.60	2	0.5	1.10:1	1.15:1	1.25:1	1.30 (33)
05 N S T	20	± 0.75	2	0.5	1.10:1	1.15:1	1.25:1	1.30 (33)
06 N S T	30	± 0.75	2	0.5	1.10:1	1.15:1	1.25:1	1.30 (33)

1/ VSWR value is for both ends.
2/ Power rating derated linearly to 0.2 Watts at 100^0C.
3/ Peak power: 500 watts at 5×10^{-4} duty cycle, 5 microsecond pulsewidth.

Referenced documents. This specification sheet only references MIL-DTL-3933.

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

Preparing activity:
DLA - CC

(Project 5985-2010-006)

Review activities:
Army - MI
Navy - AS, MC, SH
Air Force - 99

Civil agencies:
NASA - NA

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.daps.dla.mil.