

INCH-POUND

MIL-DTL-3933/30A
22 January 2014
SUPERSEDING
MIL-DTL-3933/30
10 August 2010

DETAIL SPECIFICATION SHEET

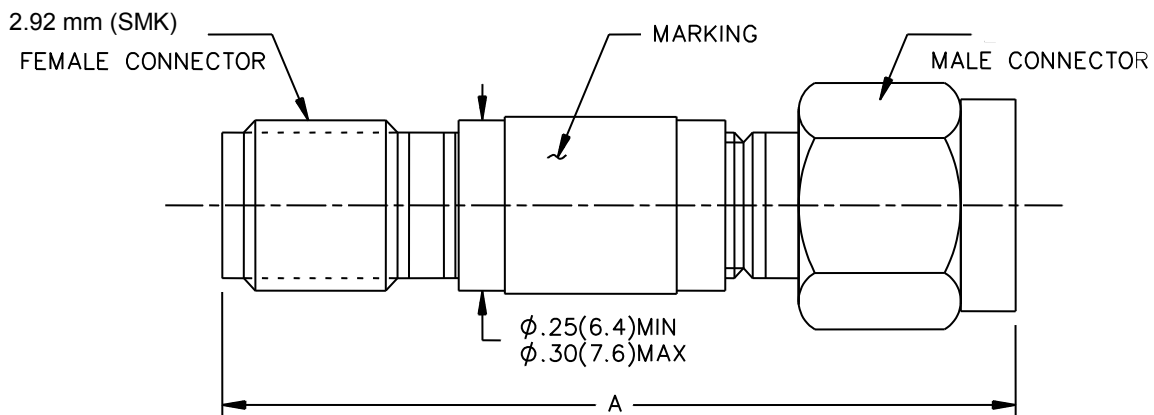
ATTENUATORS, FIXED COAXIAL CONNECTOR SPACE LEVEL, NON SPACE LEVEL,

TYPE 2.92 mm (SMK)

FREQUENCY RANGE: DC TO 32 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, 1.14 ± 0.02 (29 ± 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 32 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 32 GHz.

Basic test frequency for sensitive measurements like temperature sensitivity, power sensitivity, and any other measurements where a 'delta' specification is imposed: 16 GHz.

Operating temperature range: -55 °C to + 125 °C.

Weight: 0.22 ounces (6 g).

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): M3933/30- (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 <u>1/</u>			Dimension A in inches (mm) ±0.02 (0.5)	
		Nominal	Deviation				DC –18 GHz	18 – 26.5 GHz	26.5 -32 GHz		
DC – 26.5 GHz	26.5 – 32.0 GHz		DC – 32.0 GHz	AV (W) at 25°C <u>2/</u> (continuously)	Peak <u>3/</u> (kW)						
01	N S T	0	-	-	+ 0.5/-0.0	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
02	N S T	0.5	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
03	N S T	1.0	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
04	N S T	1.5	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
05	N S T	2.0	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
06	N S T	2.5	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
07	N S T	3.0	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
08	N S T	3.5	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
09	N S T	4.0	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
10	N S T	4.5	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
11	N S T	5.0	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)

See footnotes at end of table I.

TABLE I. Electrical characteristics - Continued.

Dash number	Attenuation (dB)				Maximum power Input		VSWR maximum <u>1/</u>			Dimension A in inches (mm) ±0.02 (0.5)
	Nominal	Deviation					DC – 18 GHz	18 - 26.5 GHz	26.5 – 32.0 GHz	
		DC – 26.5 GHz	26.5 – 32.0 GHz	DC – 32.0 GHz	AV (W) at 25°C <u>2/</u> (continuously)	Peak <u>3/</u> (kW)				
12 N S T	5.5	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
13 N S T	6.0	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
14 N S T	6.5	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
15 N S T	7.0	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
16 N S T	7.5	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
17 N S T	8.0	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
18 N S T	8.5	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
19 N S T	9.0	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
20 N S T	9.5	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
21 N S T	10.0	-	-	±0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)

See footnotes at end of table I.

TABLE I. Electrical characteristics - Continued.

Dash number		Attenuation (dB)				Maximum power Input		VSWR maximum <u>1</u> /			Dimension A in inches (mm) ±0.02 (0.5)
		Nominal	Deviation					DC – 18 GHz	18 -26.5 GHz	26.5 – 32.0 GHz	
			DC – 26.5 GHz	26.5 – 32.0 GHz	DC – 32.0 GHz						
						AV (W) at 25°C <u>2</u> / (continuously)	Peak <u>3</u> / (kW)				
22	N S T	10.5	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
23	N S T	11.0	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
24	N S T	11.5	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
25	N S T	12.0	-	-	± 0.50	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
26	N S T	13.0	± 0.8	± 1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
27	N S T	14.0	±0.8	± 1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
28	N S T	15.0	±0.8	± 1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
29	N S T	16.0	±0.8	±1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)

See footnotes at end of table I.

TABLE I. Electrical characteristics - Continued.

Dash number	Attenuation (dB)				Maximum power Input		VSWR maximum <u>1</u> /			Dimension A in inches (mm) ±0.02 (0.5)
	Nominal	Deviation					DC – 18 GHz	18 - 26.5 GHz	26.5 – 32.0 GHz	
		DC – 26.5 GHz	26.5 – 32.0 GHz	DC – 32.0 GHz	AV (W) at 25°C <u>2</u> / (continuously)	Peak <u>3</u> / (kW)				
30 N S T	17.0	±0.8	± 1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
31 N S T	18.0	±0.8	±1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
32 N S T	19.0	±0.8	±1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
33 N S T	20.0	±0.8	±1	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
34 N S T	25.0	± 1	±1.5	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)
35 N S T	30.0	±1	±1.5	-	2	0.5	1.25:1	1.30:1	1.35:1	1.14 (29)

1/ VSWR value is for both ends.2/ Power rating derated linearly from 0.5 watts at 125°C.3/ Peak power: 500 watts at 5 x 10⁻⁴ duty cycle, 5 microseconds pulsewidth.

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

The margins of this specification sheet are marked with vertical lines to indicate where modifications from this revision were made. 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 - EC
Air Force - 85
DLA - CC

Preparing activity:

DLA - CC

(Project 5985-2014-018)

Review activities:

Army - MI
Navy - AS, MC, SH
Air Force - 99

Civil agencies:

NASA - NA

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