

# Fixed Coaxial Attenuators

## Model 33 Medium Power, N or SMK Connectors Bi-directional Design!

**dc to 8.5 GHz**  
**25 Watts**  




### Features

- /// Quality Connectors with special high temperature support beads.
- /// Designed to meet environmental requirements of MIL-DTL-3933.
- /// Low Intermodulation option available.
- /// Mode free operation to 10 GHz.

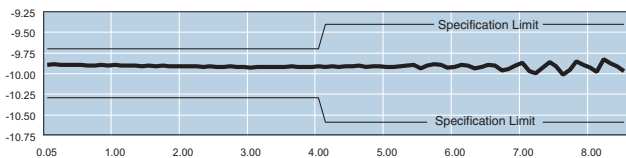
### Specifications

**NOMINAL IMPEDANCE:** 50 Ω

**FREQUENCY RANGE:** dc to 8.5 GHz

#### MAXIMUM DEVIATION OVER FREQUENCY (dB):

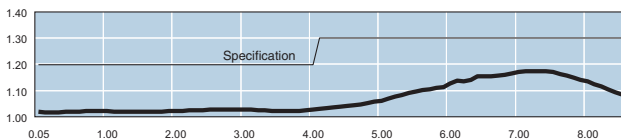
Nominal ATTN (dB)	33		33-LIM	
	dc-4 GHz	4 - 8.5 GHz	dc-4 GHz	4 - 8.5 GHz
3, 6	± 0.30	± 0.60	---	---
10, 20	± 0.30	± 0.60	± 0.40	± 0.70
30	± 0.60	± 1.00	± 0.70	± 1.20



Typical Attenuation Accuracy of a 33-10-34

#### MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.20
4 - 8.5	1.30



Typical SWR of a 33-10-34

**3rd ORDER INTERMODULATION (33-XX-XX-LIM Only):**  
 Reflected Levels (IM3), -100 dBc and Through Levels (IM3), -110 dBc with two input signals @ 869 MHz and 891 MHz with average carrier power levels of +41 dBm each.

**POWER RATING (mounted horizontally):** 25 watts average (bi-directional) to 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. 5 kilowatt peak (5 μsec pulse width; 0.25% duty cycle).

**POWER COEFFICIENT:** <0.0006 dB/dB/watt

**TEMPERATURE COEFFICIENT:** <0.0004 dB/dB/°C

**TEMPERATURE RANGE:** -55 °C to 125 °C

**TEST DATA:** Swept data plots of attenuation and SWR from 50 MHz to 8.5 GHz.

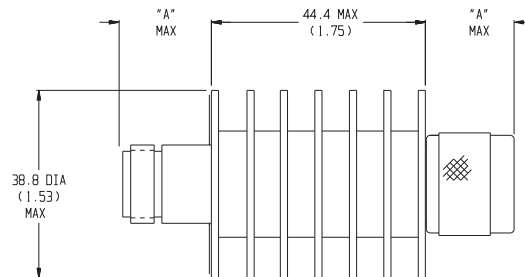
**CONNECTORS:** Type N connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors. SMK (2.92mm) connectors - mate nondestructively with SMA per MIL-C-39012, 3.5mm, SMK, and other 2.92mm. Female 2.92mm connector NOT RoHS compliant.

Options	Description	Options	Description
1	SMK Female	3	Type N, Female
2	SMK Male	4	Type N, Male

**CONSTRUCTION:** Black, finned aluminum body, gold plated beryllium copper contacts.

**WEIGHT:** 170 g (6 oz.) maximum

#### PHYSICAL DIMENSIONS:

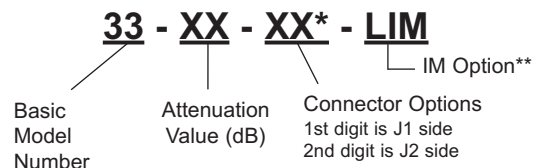


Connector	DIM A	Connector	DIM A
N Male	22.9 (0.90)	2.92mm Male	14.0 (0.55)
N Female	15.0 (0.59)	2.92mm Female	12.7 (0.50)

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

#### MODEL NUMBER DESCRIPTION:

Example:



\*Unit is bi-directional & full power may be applied to either J1 or J2.

\*\*Add -LIM to entire model number for Low Intermodulation option.

Available in only 10, 20, 30 dB and is not available through Express.