

# Fixed Coaxial Attenuators



## Model 24 Medium Power Fixed Coaxial Attenuator

dc to 8.5 GHz  
50 Watts

**Bi-Directional Design!**

**RoHS**



### Features

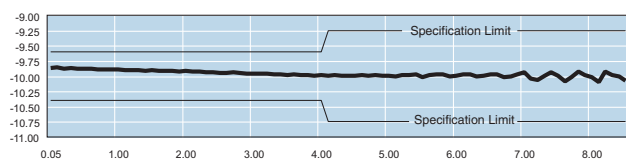
- Designed to meet environmental requirements of MIL-DTL-3933.
- Low Intermodulation option available.
- Mode free operation to 10 GHz.

### Specifications

**NOMINAL IMPEDANCE:** 50  $\Omega$

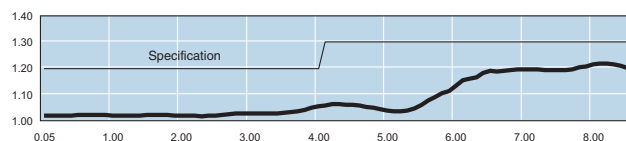
**FREQUENCY RANGE:** dc to 8.5 GHz

| MAXIMUM DEVIATION OVER FREQUENCY (dB): |            |            |             |            |
|----------------------------------------|------------|------------|-------------|------------|
| Nominal<br>ATTN (dB)                   | dc-4 GHz   |            | 4 - 8.5 GHz |            |
|                                        | 24         | 24-LIM     | 24          | 24-LIM     |
| 3, 6                                   | $\pm 0.40$ | - - -      | $\pm 0.75$  | - - -      |
| 10, 20                                 | $\pm 0.40$ | $\pm 0.50$ | $\pm 0.75$  | $\pm 1.00$ |
| 30, 40                                 | $\pm 0.60$ | $\pm 0.70$ | $\pm 1.00$  | $\pm 1.25$ |



Typical Attenuation Accuracy of a 24-10-34

| MAXIMUM SWR:    |      |
|-----------------|------|
| Frequency (GHz) | SWR  |
| dc - 4          | 1.20 |
| 4 - 8.5         | 1.30 |



Typical SWR of a 24-10-34

**3rd ORDER INTERMODULATION (24-XX-XX-LIM only!):** Reflected Levels (IM3), -100 & Through Levels (IM3), -110 dBc with two input signals @ 869 MHz and 891 MHz with average carrier power levels of +43 dBm each. Option only available 10, 20, 30, 40 dB. IM specification at J2 limited to 20 Watts of input power.

**POWER RATING (mounted horizontally):** 50 watts **average (bi-directional)** to 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. Note: 3 dB model can handle 100 Watts **average (bi-directional)**. 5 kilowatt **peak** (5  $\mu$ sec pulse width; 0.5% duty cycle).

**POWER COEFFICIENT:** <0.0003 dB/dB/watt

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

**TEMPERATURE RANGE:** -55°C to 125°C

**TEST DATA:** Insertion loss test data supplied at 0.05, 4.0, and 8.5 GHz. Other test data can be provided at additional cost.

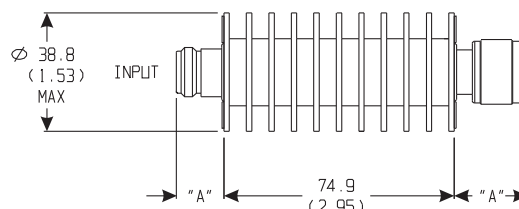
**CONNECTORS:** Type N connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors. 2.92mm connectors - mate nondestructively with SMA per MIL-C-39012, 3.5mm, SMK, and other 2.92mm. Female 2.92mm connector NOT RoHS compliant.

| Options | Description    | Options | Description    |
|---------|----------------|---------|----------------|
| 1       | 2.92mm, Female | 3       | Type N, Female |
| 2       | 2.92mm, Male   | 4       | Type N, Male   |

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

**WEIGHT:** 280 g (10 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.
- Unit available with RoHS compliant materials, specify when ordering.

### MODEL NUMBER DESCRIPTION:

Example:

| <u>24</u> - <u>XX</u> - <u>XX*</u> - <u>LIM</u> |                           |                                                                   |  |
|-------------------------------------------------|---------------------------|-------------------------------------------------------------------|--|
| Basic Model<br>Number                           | Attenuation<br>Value (dB) | Connector Options<br>1st digit is J1 side<br>2nd digit is J2 side |  |
|                                                 |                           |                                                                   |  |
|                                                 |                           | IM Option**                                                       |  |

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

\*\*Add -LIM to entire model number for Low Intermodulation option. Option only available in 10, 20, 30, 40 dB and is not available through Express.