

## Model 90 Medium Power, N & 3.5mm Connectors Bi-directional Design

dc to 18.0 GHz  
 50 Watts

 **RoHS**



### Features

- /// Precision injection molded connectors.
- /// Designed to meet environmental requirements of MIL-DTL-3933.
- /// Flat Response.
- /// Low Intermodulation option available.

### Specifications

**NOMINAL IMPEDANCE:** 50 Ω

**FREQUENCY RANGE:** dc to 18.0 GHz

#### MAXIMUM DEVIATION OVER FREQUENCY:

| Nominal ATTN (dB) | Deviation (dB) |             |
|-------------------|----------------|-------------|
|                   | 90             | 90-LIM      |
| 3, 6              | ± 1.0          | ---         |
| 10, 20, 30        | ± 1.0          | +2.0 / -1.0 |

#### MAXIMUM SWR:

| Frequency (GHz) | SWR  |
|-----------------|------|
| dc - 8          | 1.15 |
| 8 - 12.4        | 1.20 |
| 12.4 - 18       | 1.30 |

**3rd ORDER INTERMODULATION (90-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 +43 dBm each. Option only available 10, 20, 30 dB.

**POWER RATING (mounted horizontally):** 50 watts average (bi-directional) to 25°C ambient temperature, derated linearly to 5 Watts @ 125°C. 1 kW peak (5 μsec pulse width; 2.5% 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:** Swept data plots of attenuation and SWR from 50 MHz to 18 GHz. Frequency markers at 0.05, 2.0, 4.0, 8.0, 12.4, 18.0 GHz

**CONNECTORS:** Type N connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors.

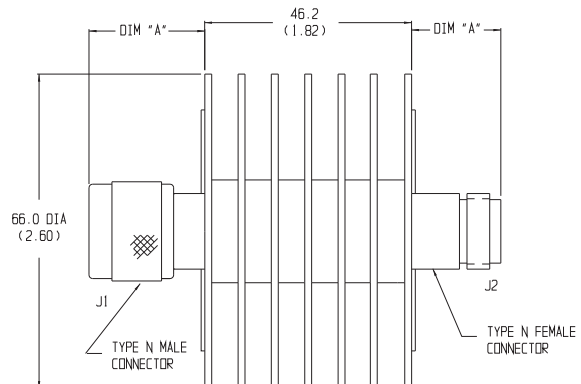
3.5mm Connectors - mate nondestructively with SMA per MIL-C-39012, 2.92mm and 3.5mm connectors.

| Options | Description  | Options | Description    |
|---------|--------------|---------|----------------|
| 1       | 3.5mm Female | 3       | Type N, Female |
| 2       | 3.5mm Male   | 4       | Type N, Male   |

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

**WEIGHT:** 120 g (4.2 oz.) maximum

#### PHYSICAL DIMENSIONS:

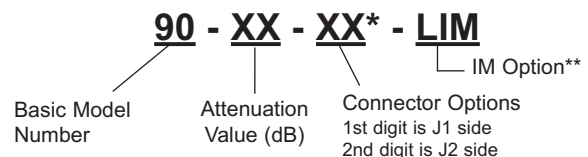


| Connector | DIM A       | Connector    | DIM A       |
|-----------|-------------|--------------|-------------|
| N Male    | 24.1 (0.95) | 3.5mm Male   | 14.0 (0.55) |
| N Female  | 19.0 (0.75) | 3.5mm Female | 13.2 (0.52) |

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. Option only available in 10, 20, 30 dB.