

Fixed Coaxial Attenuators



Model 68 High Power Fixed Coaxial Attenuator

dc to 4.0 GHz
100 Watts

Convection Cooled



Features

- /// Precision Connectors with high temperature support beads.
- /// Designed to meet environmental requirements of MIL-A-3933.
- /// 10 Kilowatts peak, Convection Cooled
- /// Wireless Applications - Optimized for use in the communications bands.

Specifications

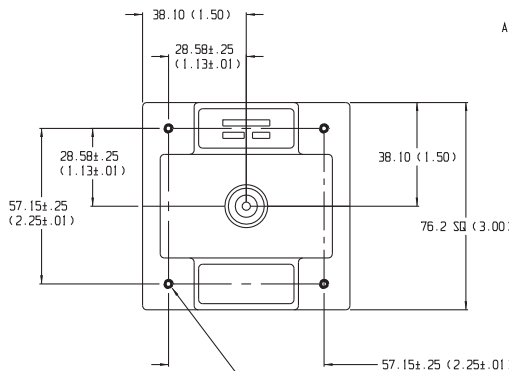
NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 4.0 GHz

MAXIMUM DEVIATION OVER FREQUENCY:	
Nominal ATTN (dB)	Deviation (dB)
1, 2	± 1.20
3, 6, 10, 20, 30	± 1.25
40	± 2.00

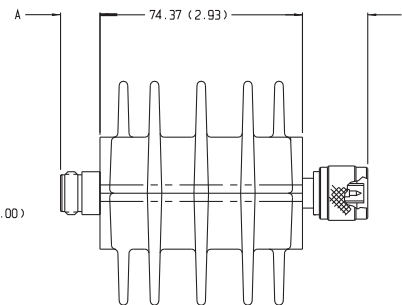
MAXIMUM SWR:	
Frequency (GHz)	SWR
dc - 4	1.20

PHYSICAL DIMENSIONS:



Connector	DIM A
N Male	22.9 (0.90)
N Female	15.0 (0.59)

(#6-32 UNC-2B) THRU 1ST FIN
4 HOLES BOTH ENDS



POWER RATING (mounted horizontally): 100 watts average (unidirectional) to 25°C ambient temperature, derated linearly to 10 watts @ 125°C. Note: 3 dB model can handle 200 Watts average (unidirectional). 10 kilowatts peak (5 μsec pulse width; 0.5% duty cycle). Maximum power rating into output port is 10% of the average power rating.

POWER COEFFICIENT: <0.00025 dB/dB/watt

TEMPERATURE COEFFICIENT: <0.0004 dB/dB/°C

TEMPERATURE RANGE: -55°C to 100°C

TEST DATA: Insertion Loss and SWR Testing performed across frequency range. Test data available at additional cost.

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

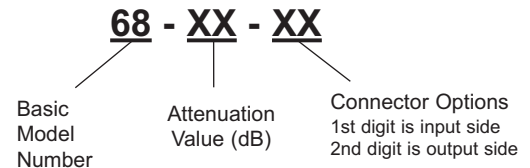
Connector Options	Type/Description
3	Type N, Female
4	Type N, Male

CONSTRUCTION: Aluminum alloy body, stainless steel connectors; gold plated beryllium copper contacts.

WEIGHT: 500 g (18 oz.) maximum

MODEL NUMBER DESCRIPTION:

Example:



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

Model 48 Medium Power Fixed Coaxial Attenuator

dc to 18.0 GHz
100 Watts

Type N or 3.5mm Connectors



Features

- Designed to meet environmental requirements of MIL-A-3933.
- Low Intermodulation option available.
- Rugged injection molded connectors.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM DEVIATION OVER FREQUENCY (dB):			
Nominal ATTN (dB)	48	48 LIM	
		dc-8 GHz	8-18 GHz
6	± 2.00	---	---
10	± 1.25	± 1.00	+3.0/-0.0
20	± 0.75	± 1.00	+3.0/-0.0
30, 40	± 1.00	± 1.00	+3.0/-0.0

MAXIMUM SWR:				
Frequency (GHz)	48			48 LIM
	6 dB	10 dB	20, 30, 40 dB	
dc - 8	1.30	1.40	1.25	1.40
8 -12.4	1:45	1.40	1.35	1.45
12.4 - 18	1.60	1.55	1.45	1.45

POWER RATING (mounted horizontally): 100 watts average (unidirectional) to 25°C ambient temperature, derated linearly to 10 watts @ 125°C. 1 kilowatt peak (5 μsec pulse width; 5% duty cycle). Maximum power rating into output port is 10 Watts average.

3rd ORDER INTERMODULATION (48-XX-XX-LIM only): Reflected Levels (IM3), -90 dBc & Through Levels (IM3), -100 dBc with two input signals @ 869 MHz and 891 MHz with average carrier power levels of +43 dBm each.

POWER COEFFICIENT: <0.00015 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, 8.0, 12.4, and 18.0 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.

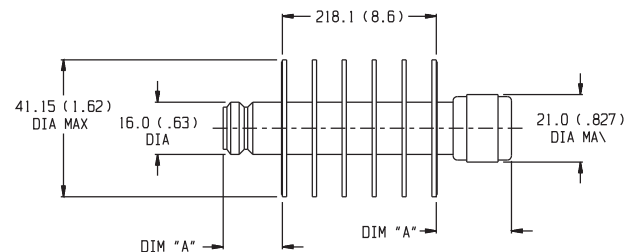
3.5mm (Male/Female) connectors - mate nondestructively with SMA per MIL-C-39012, 2.92mm and other 3.5mm connectors.

Connector Options	Type/Description
1	3.5mm, Female
2	3.5mm, Male
3	Type N, Female
4	Type N, Male

CONSTRUCTION: Black, finned aluminum body, stainless steel connectors, gold plated beryllium copper contacts.

WEIGHT: 320 g (11 oz.) maximum

PHYSICAL DIMENSIONS:

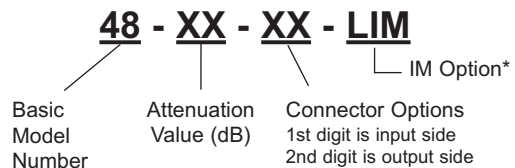


Connector	DIM A
3.5mm Female	13.2 (0.52)
3.5mm Male	14.0 (0.55)
N Male	24.1 (0.95)
N Female	19.0 (0.75)

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

MODEL NUMBER DESCRIPTION:

Example:



* Add -LIM to entire model number for Low Intermodulation option. Option is not available through Express.

Fixed Coaxial Attenuators



Model 73 High Power Fixed Coaxial Attenuator

dc to 8.5 GHz
100 Watts



Type N Connectors



Features

- /// Compact Construction - Lowest size/power ratio.
- /// Quality connectors with special high temperature support beads.
- /// Designed to meet environmental requirements of MIL-A-3933.

Specifications

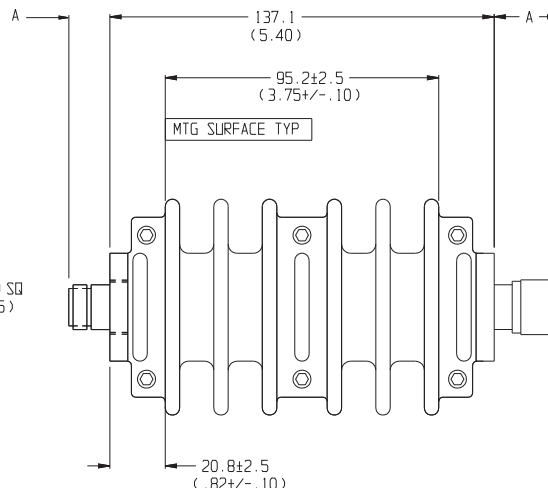
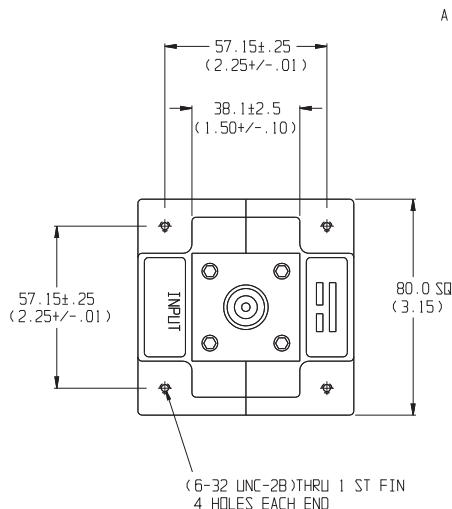
NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 8.5 GHz

Nominal ATTN (dB)	Deviation (dB)	
	dc-4 GHz	4 - 8.5 GHz
3, 6, 10, 20, 30	± 0.75	± 0.75
40	± 0.50	± 1.00

Frequency (GHz)	SWR
dc - 4	1.25
4 - 8.5	1.35

PHYSICAL DIMENSIONS:



Connector	DIM A
N Male	22.9 (0.90)
N Female	15.0 (0.59)

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

POWER RATING (mounted horizontally with fins vertical): 100 watts **average** (unidirectional) to 35°C ambient temperature, derated linearly to 10 watts @ 125°C. Note: 3 dB model can handle 200 Watts **average** (unidirectional). 5 kilowatt **peak** (5 μsec pulse width; 1.0% duty cycle). Maximum power rating into output port is 20 watts average.

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.

Connector Options	Type/Description
3	Type N, Female
4	Type N, Male

CONSTRUCTION: Aluminum alloy body, stainless steel connectors; gold plated beryllium copper contacts.

WEIGHT: 1130 g (2 lbs, 8 oz.) maximum

MODEL NUMBER DESCRIPTION:

Example:

