

Fixed Coaxial Attenuators



Model 34 Medium Power Fixed Coaxial Attenuator

dc to 4.0 GHz
25 Watts

Bi-directional Design



Features

- /// Optimized for Wireless OEM & Test Applications.
- /// Precision Connectors with high temperature support beads.
- /// Designed to meet environmental requirements of MIL-A-3933.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 4.0 GHz

MAXIMUM DEVIATION OVER FREQUENCY:

Nominal ATTN (dB)	Deviation (dB)	
	dc-2 GHz	2 - 4 GHz
3, 6, 10, 20, 30	± 0.60	± 1.00

MAXIMUM SWR*:

Frequency (GHz)	SWR
dc - 2	1.10
2 - 4	1.20

POWER RATING (mounted horizontally): 25 watts average (bi-directional) to 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. Note: 3 dB model can handle 50 Watts average (bi-directional). 5 kilowatt peak (5 μsec pulse width; 0.5% 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: Insertion loss test data supplied at 0.05, and 4.0 GHz. Other test data can be provided at additional cost.

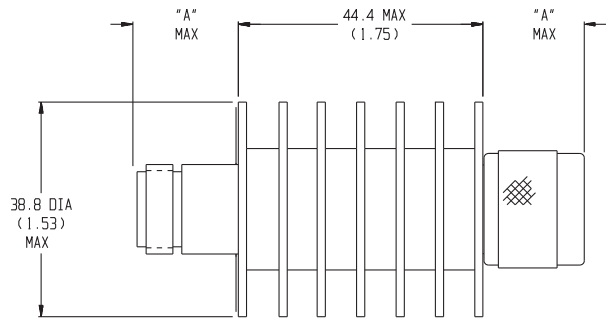
CONNECTORS: Type N connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors.

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

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

WEIGHT: 170 g (6 oz.) maximum

PHYSICAL DIMENSIONS:

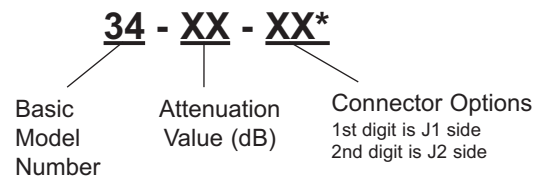


Connector	DIM A
N Male	22.9 (0.90)
N Female	15.0 (0.59)

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

MODEL NUMBER DESCRIPTION:

Example:



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

Model 33 Medium Power Fixed Coaxial Attenuator

dc to 8.5 GHz
25 Watts

Bi-directional Design!

RoHS



Features

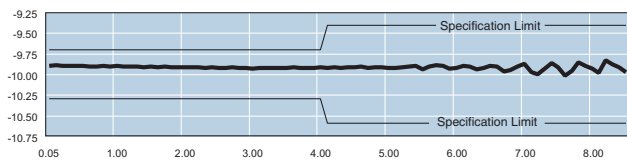
- Quality Connectors with special high temperature support beads.
- Designed to meet environmental requirements of MIL-A-3933.
- Low Intermodulation option available.
- Mode free operation to 10 GHz.

Specifications

NOMINAL IMPEDANCE: 50 Ω

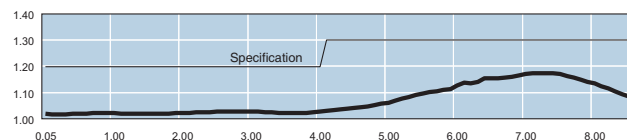
FREQUENCY RANGE: dc to 8.5 GHz

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



Typical Attenuation Accuracy of a 33-10-34

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. IM specification at J2 limited to 10 Watts of input power.

POWER RATING (mounted horizontally): 25 watts average (bi-directional) to 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. Note: 3 dB model can handle 50 Watts average (bi-directional). 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: Insertion loss test data supplied at 0.05, 4.0, and 8.0 GHz. Other test data can be provided at additional cost.

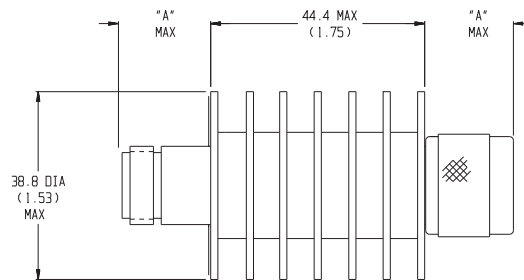
CONNECTORS: Type N & 2.92mm connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors.

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: 170 g (6 oz.) maximum

PHYSICAL DIMENSIONS:

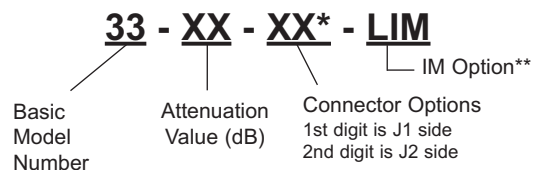


Connector	DIM A	Connector	DIM A
N Male	22.9 (0.90)	2.92mm Female	14.0 (0.55)
N Female	15.0 (0.59)	2.92mm Male	

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.

Fixed Coaxial Attenuators



Model 46 Medium Power Fixed Coaxial Attenuator

dc to 18.0 GHz
25 Watts

Bi-directional Design!



Features

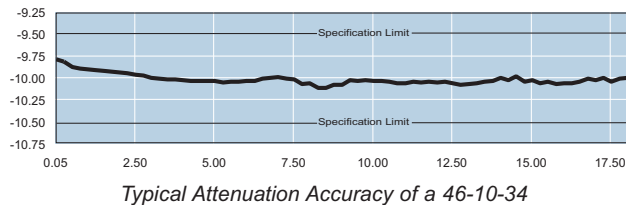
- Designed to meet environmental requirements of MIL-A-3933.
- Rugged injection molded connector dielectric.
- Low Intermodulation option available.

Specifications

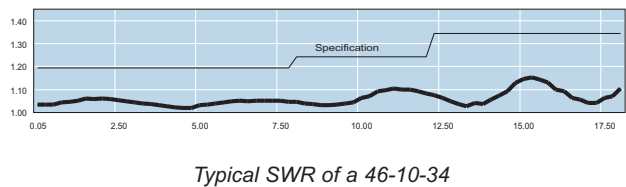
NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM DEVIATION OVER FREQUENCY:			
Nominal ATTN (dB)	46	46 LIM	
		dc - 8 GHz	8- 18 GHz
3, 6	± 0.50	---	---
10	± 0.50	± 1.00	+2.0/-1.0
20	± 0.75	± 1.00	+2.0/-1.0
30, 40	± 1.00	± 1.00	+2.0/-1.0



MAXIMUM SWR:	
Frequency (GHz)	SWR
dc - 8	1.20
8 -12.4	1.25
12.4 - 18	1.35



3rd ORDER INTERMODULATION (46-XX-XX-LIM ONLY): Reflected Levels (IM3), -90 dBc and Through Levels (IM3), -100 dBc with two input signals @ 869 MHz and 891 MHz with average carrier power levels of +41 dBm each. Option only available 10, 20, 30, 40 dB.

POWER RATING (mounted horizontally): 25 watts average (bi-directional) to 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. Note: 3 dB model can handle 50 Watts average (bi-directional). 1 kilowatt peak (5 μsec pulse width; 1.25% 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: Insertion loss test data supplied at 0.05, 4.0, 8.0, 12.0, 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.

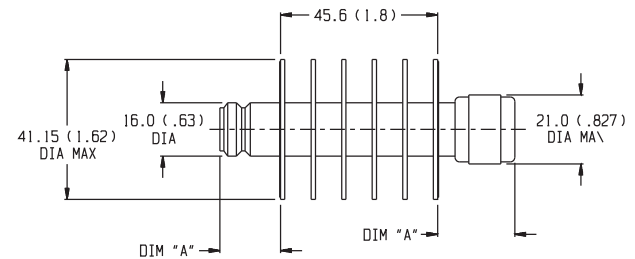
3.5mm Connectors - mate nondestructively with SMA per MIL-C-39012, 2.92mm and other 3.5mm connectors.

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, stainless steel connectors with gold plated beryllium copper contacts.

WEIGHT: 110 g (4 oz.) maximum

PHYSICAL DIMENSIONS:

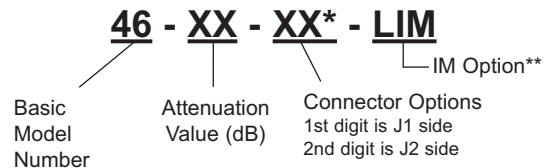


Connector	DIM A	Connector	DIM A
N Male	24.1 (0.95)	3.5mm Female	14.0 (0.55)
N Female	19.0 (0.75)	3.5mm Male	13.2 (0.52)

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 for Low Intermodulation option. Option only available in 10, 20, 30 and 40 dB and is not available through Express.