

# Fixed Coaxial Attenuators

Model 254

Low Passive Intermodulation

N or SMK Connectors, Convection Cooled

dc to 6.5 GHz

175 Watts

RoHS



## FEATURES

- /// Low PIM design
- /// Lower profile design
- /// Quality connectors with special high temperature support beads
- /// Rugged construction, free of solder joints.

## SPECIFICATIONS

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 6.5 GHz

### MAXIMUM DEVIATION OVER FREQUENCY:

Nominal ATTN (dB)	Deviation (dB)
10, 20, 30	± 1.50
40	± 2.00

### MAXIMUM SWR:

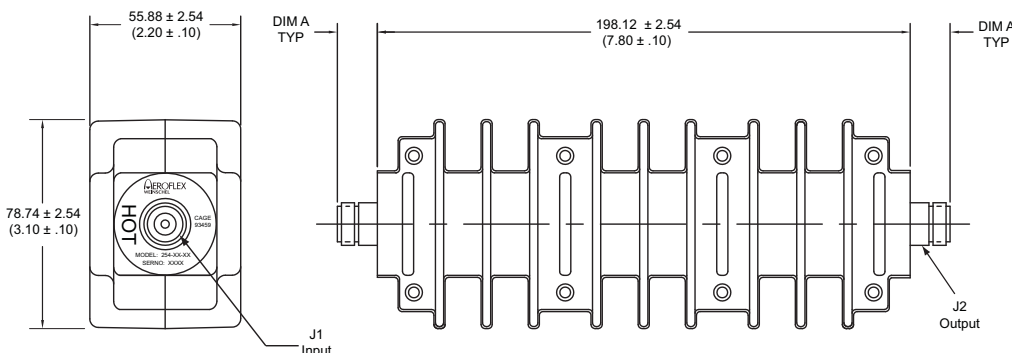
Frequency (GHz)	SWR
dc - 2.5	1.10
2.5 - 6.5	1.20

### PASSIVE INTERMODULATION (PIM) LEVELS:

Nominal ATTN (dB)	3rd Order IM Magnitude (IM3)	
	THROUGH	REFLECTED
10	-120 dBc	-115 dBc
20	-130 dBc	-115 dBc
30	-140 dBc	-115 dBc
40	-150 dBc	-115 dBc

IM3 levels tested with two input signals @ 869 MHz and 891 MHz with average carrier power levels of +43 dBm each.

## PHYSICAL DIMENSIONS:



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

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

**POWER RATING** (mounted horizontally with fins vertical): 175 watts **average** (unidirectional) to 25°C ambient temperature, derated linearly to 17 watts @ 125°C. 10 kilowatt **peak** (5 μsec pulse width; 0.9% duty cycle). Maximum power rating into output port is 50 watts average.

**POWER COEFFICIENT:** <0.0001 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 6.5 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 connectors.

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

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

**WEIGHT:** Net 1,300 g (2 lbs., 14 oz.) maximum

## MODEL NUMBER DESCRIPTION:

Example:

**254 - XX - XX**

Basic Model Number

Attenuation Value (dB)

Connector Options  
1st digit is input side  
2nd digit is output side

Note: Specifications subject to change without notice.