Fixed Coaxial Attenuators

api technologies corp.
› WEINSCHEL

Model 254
Low Passive Intermodulation
N or SMK Connectors, Convection Cooled

dc to 6.0 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 6.0 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 - 6.0	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.

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 6.0 GHz are available upon request.

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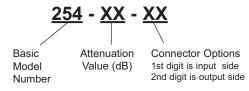
Options	Description	Options	Description
1	SMK Female	3	Type N Female
2	SMK Male	4	Type N Male

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

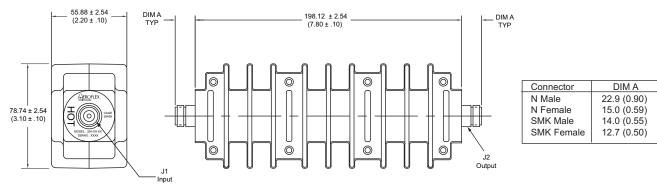**WEIGHT:** Net 1,300 g (2 lbs., 14 oz.) maximum

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.

PHYSICAL DIMENSIONS:

55.88 ± 2.54 (2.20 ± .10)

78.74 ± 2.54 (3.10 ± .10)

HOT

MODEL: 254-XX-XX
SERNO: XXXX

J1 Input

DIM A TYP

198.12 ± 2.54 (7.80 ± .10)

DIM A TYP

J2 Output

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.

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