2.4 MM PRECISION FIXED ATTENUATOR

2.4 mm Precision Fixed Attenuator Series

2 W | DC–50 GHz | 50 Ω



50 GHz	2 W
MAX FREQUENCY	POWER RATING
2.4 mm M–F	**< 1.45**
CONNECTOR CONFIGURATION	MAX VSWR

General Description: The Vinstronics VST-U-24XX0202-50G is a 2.4 mm precision fixed attenuator series covering DC–50 GHz. The series supports attenuation values from 1 to 10 dB, plus 20 and 30 dB options. It offers 2 W power handling at 25°C, 50 Ω impedance, and peak power capability up to 200 W under specified pulse conditions. Its construction combines gold-plated connector interfaces with a passivated stainless-steel body for precision RF and millimeter-wave test applications.

Core Features

- **DC–50 GHz Coverage:** Broadband operation for RF and millimeter-wave test systems.
- **Wide Attenuation Range:** Available from 1 to 10 dB, plus 20 and 30 dB options.
- **2 W Power Rating:** Rated at 2 W at 25°C.
- **Temperature-Derated Power:** 0.25 W power handling at 125°C.
- **200 W Peak Power:** Peak power capability of 0.2 kW at 5 µs pulse width and 1% duty cycle.
- **Low VSWR:** Maximum VSWR below 1.45 across the specified frequency range.

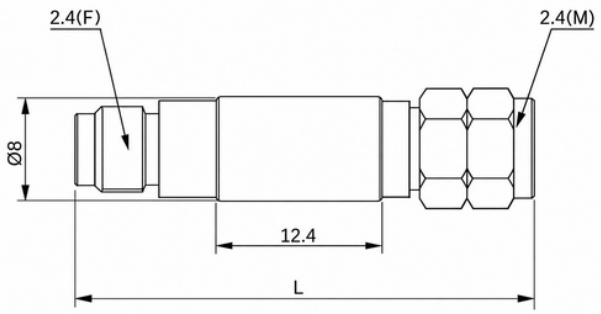
Target Applications

- **Millimeter-Wave Test Systems:** Signal level control in DC–50 GHz measurement paths.
- **VNA Measurement Chains:** Fixed attenuation for high-frequency measurement setups.
- **RF Module & Device Testing:** Fixed attenuation for component and subsystem evaluation.
- **2.4 mm Interconnect Systems:** Inline attenuation in precision RF and millimeter-wave assemblies.

ELECTRICAL PERFORMANCE	
Frequency Range	DC–50 GHz
Available Attenuation	1–10 dB / 20 dB / 30 dB
VSWR (Max)	< 1.45
Impedance	50 Ω
Power Rating	2 W @ 25°C
Power Rating at 125°C	0.25 W
Peak Power	200 W (5 µs, 1% duty cycle)
Temperature Range	-55°C to +125°C

MECHANICAL & MATERIALS	
Connector Configuration	2.4 mm Male-to-Female
Connector Outer Material	Brass, gold-plated
Male Inner Contact	Brass, gold-plated
Female Inner Contact	Bronze, gold-plated
Body Material	Passivated stainless steel
Size, 1–20 dB	Ø8 × 29 mm
Size, 30 dB	Ø8 × 31.4 mm
Compliance	RoHS

MECHANICAL OUTLINE



Dimensions in mm. 1-20 dB: Ø8 × 29 mm; 30 dB: Ø8 × 31.4 mm.

ATTENUATION OPTIONS & TOLERANCES				
Attenuation Range / Value	1–9 dB	10 dB	20 dB	30 dB
Attenuation Tolerance	±1.1 dB	±1.5 dB	±1.5 dB	±1.5 dB

Part-number logic: XX denotes the attenuation value in the VST-U-24XX0202-50G series.

ENGINEERING SUMMARY

29 / 31.4 mm	Ø8 mm	1-10 / 20 / 30 dB	2.4 mm M–F
OVERALL LENGTH	BODY DIAMETER	ATTENUATION OPTIONS	CONFIGURATION

ORDERING INFORMATION

VST-U-24XX0202-50G

2.4 mm Male-to-Female Precision Fixed Attenuator, 2 W, DC–50 GHz, 50 Ω.

1–9 dB	10 dB	20 dB	30 dB

XX denotes the attenuation value in the series part number.

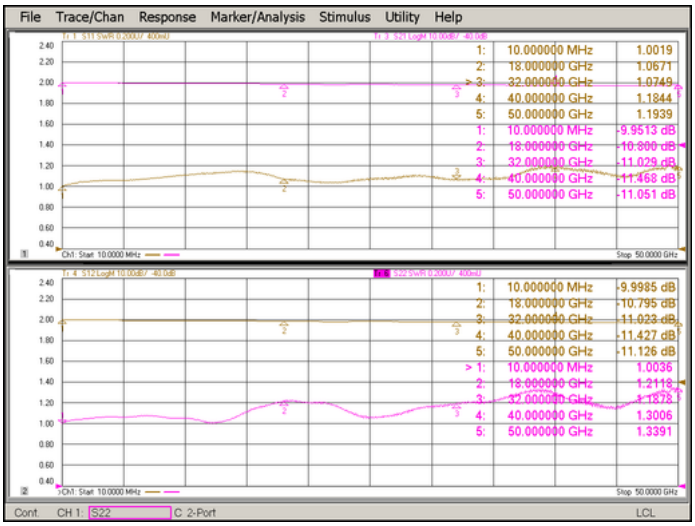
Engineering Support: Attenuation selection, configuration review, and RF test documentation.

TEST & VERIFICATION

RF Test Report

Available upon request.

REPRESENTATIVE MEASURED PERFORMANCE



10 dB model | 2 W @ 25°C. Representative test data from VU24100202. Additional RF test data available upon request.