



Absorptive Voltage Control Attenuator 2 – 18 GHz



Features

- Wide Band Operation 2-18 GHz
- Wide Attenuation Range 50dB
- Absorptive Topology
- Single Control Operation

Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

Electrical Specifications, $T_A = +25^\circ\text{C}$

Description	PN: RFVAT0218A50			
	Absorptive Voltage Attenuator			
Parameters	Min	Typ.	Max	Units
Frequency Range	2~ 18			GHz
Attenuation Range	50			dB
Insertion Loss		2.0	3.0	dB
Insertion Loss Temperature Coefficient		0.01		dB/°C
Input VSWR		1.5	2.0	: 1
Output VSWR		1.5	2.0	: 1
0.1dB Compression Point (Po.1dB)		30		dBm
Input IP ₃		43		dBm
Switching Speed			2.5	us
Control Voltage	0	10		V
Weight	0.35			ounces
Impedance	50			Ω
current	30			mA
Input / Output Connectors	SMA-Female			
Finish	Gold plated			
Material	Copper			
Sealing	Hermetically Sealed (Optional)			

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Absolute Maximum Ratings

Control Voltage	0 ~ 13V
RF Input power	+30dBm

Ordering Information

Part No.	ECCN	Description
RFVAT0218A50	EAR99	2-18GHz Voltage Control Attenuator

Environmental Specifications and Test Standards

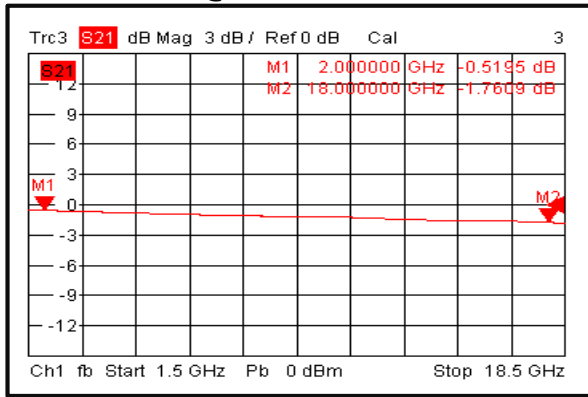
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude		Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883	MIL-STD-883 (For Hermetically Sealed Units)

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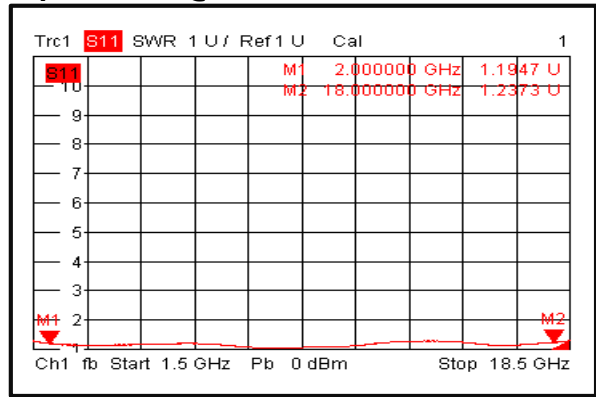


Typical Performance Plots

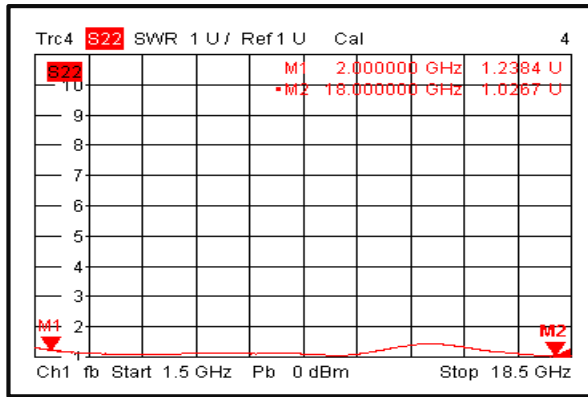
Insertion Loss @+25°C



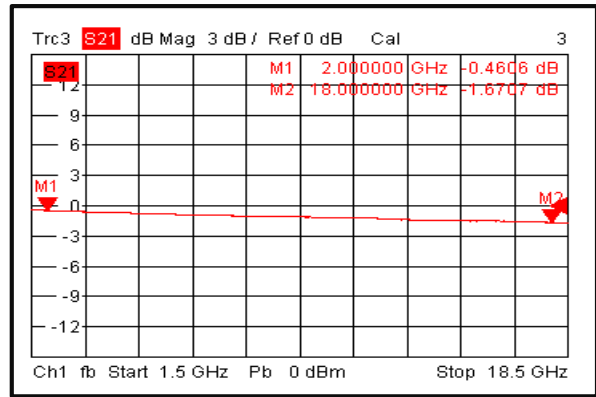
Input VSWR @+25°C



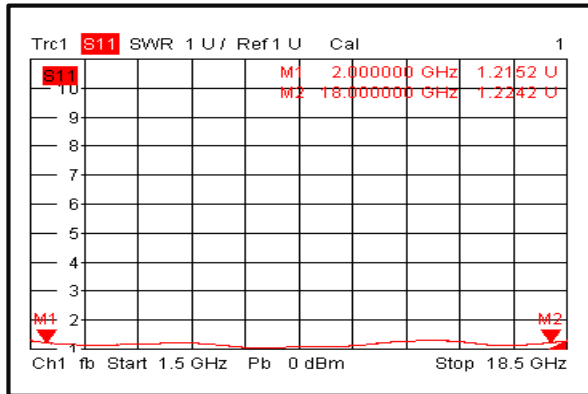
Output VSWR @+25°C



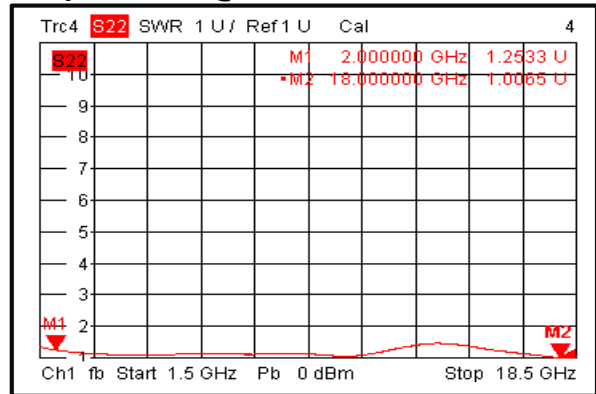
Insertion Loss @-45°C



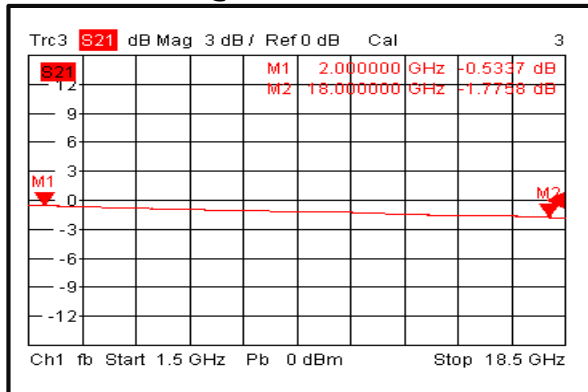
Input VSWR @-45°C



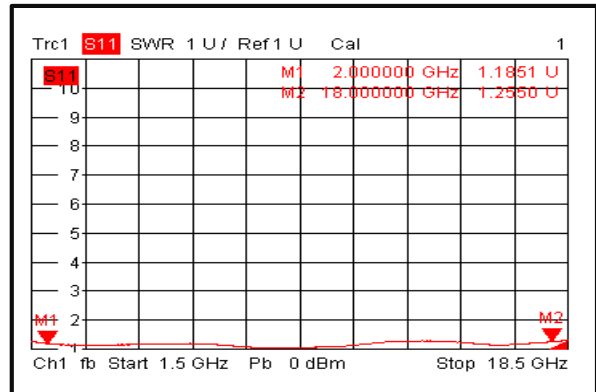
Output VSWR @-45°C



Insertion Loss @+85°C



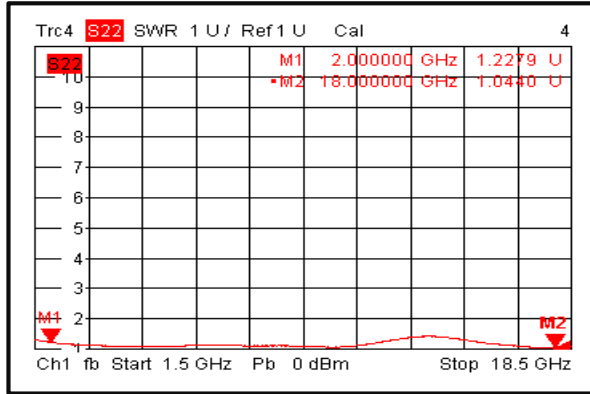
Input VSWR @+85°C



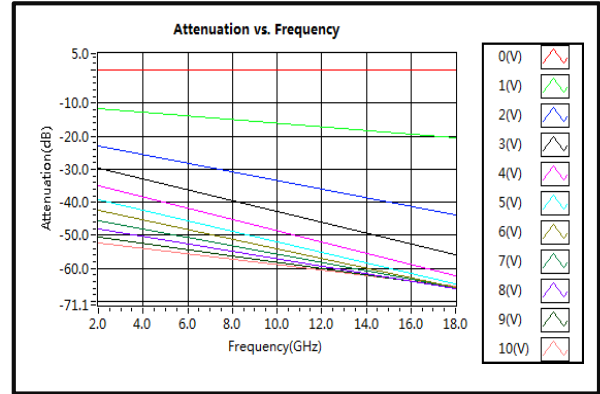
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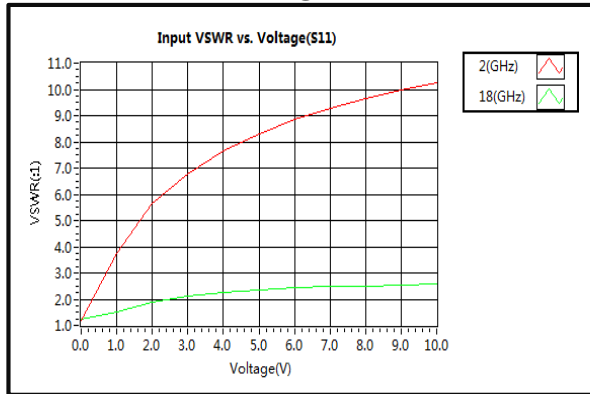
Output VSWR @+85°C



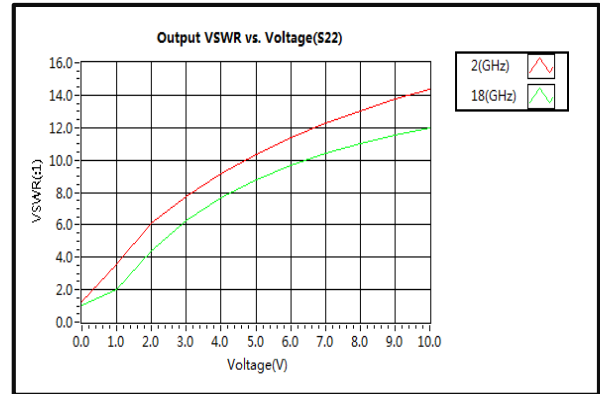
Attenuation vs. Frequency



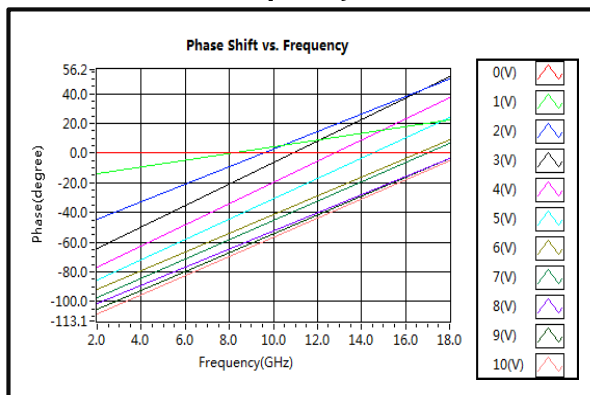
Input VSWR vs. Voltage



Output VSWR vs. Voltage



Phase Shift vs. Frequency

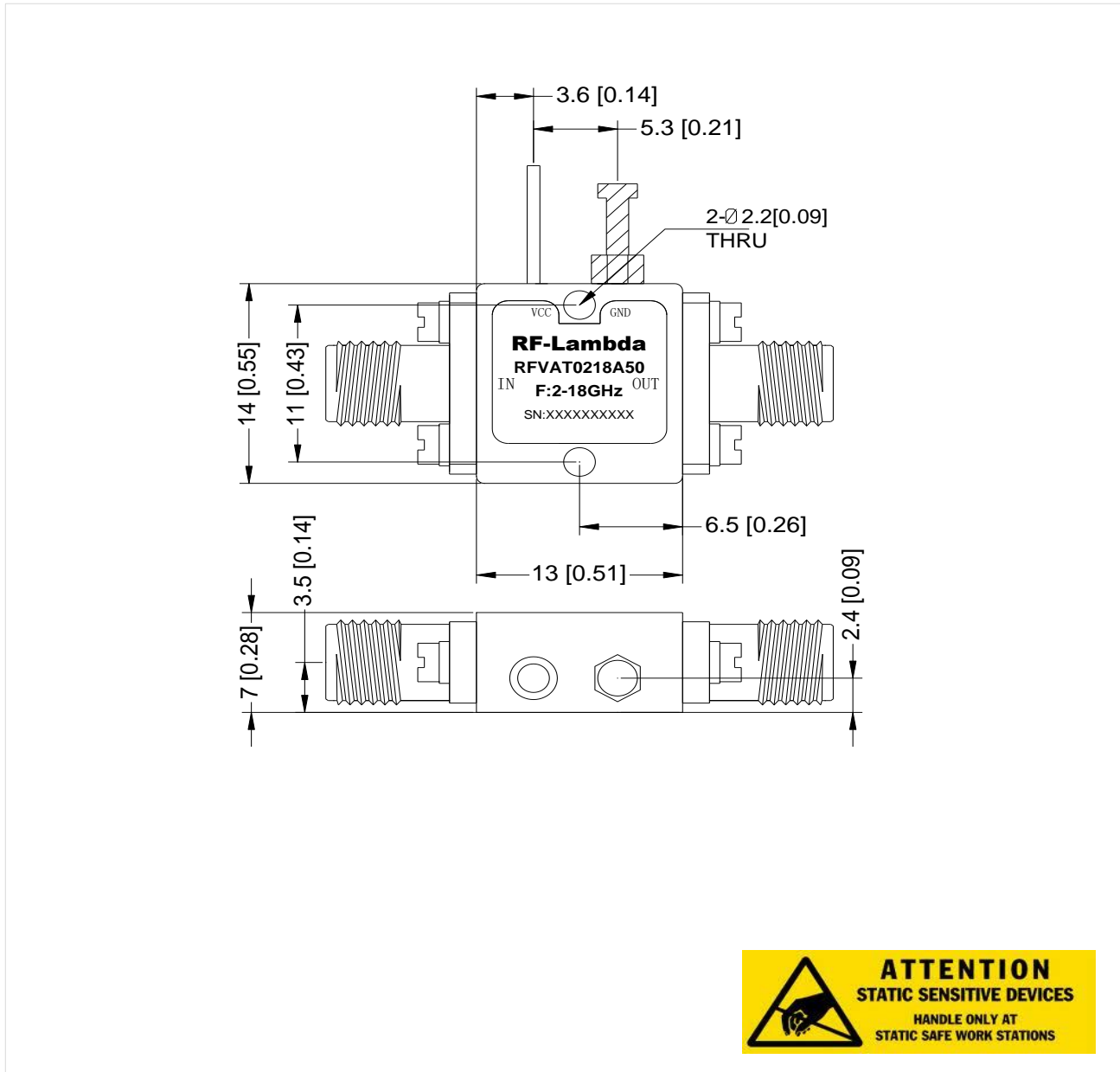


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Outline Drawing:

All Dimensions in mm [inches]



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