



Absorptive Voltage Control Attenuator 0.01-50GHz

Features

- Ultra Wide Band Operation 0.01-50GHz
- Wide Attenuation Range: 34dB
- Absorptive Topology
- Double Negative Control Operation
- Customization available upon request



Parameters	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	0.01 ~ 18			18~ 34			34~50			GHz
Attenuation Range	25	30		28	34		30	34		dB
Insertion Loss		4.2	5.0		5.3	6.0		7.3	8.0	dB
Insertion Loss Temperature Coefficient		0.01			0.01			0.01		dB/ °C
Input VSWR @ Insertion Loss state		1.6	2.2		1.8	2.2		1.8	2.2	: 1
Output VSWR @ Insertion Loss state		1.6	2.2		1.8	2.2		1.8	2.2	: 1
0.1dB Compression Point (P0.1dB)		27			27			26		dBm
Input Ip3		33			33			32		dBm
Control Voltage		-1	0.5		-1	0.5		-1	0.5	V
Weight	0.4 Max.									ounces
Impedance	50									Ω
Current	40 Max.									mA
Input / Output Connectors	2.4mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



Absolute Maximum Ratings

Control Voltage	-3V ~ +0.5V
RF Input power	+27dBm

Environmental Specifications

Operational Temperature	-40°C~+85°C
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Uncontrolled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Ordering Information

Part No.	Description
DBVA3000015000C	0.01-50GHz Voltage Control Attenuator

Outline Drawing:

All Dimensions in mm (inches) Housing Tolerances ± 0.1 (0.004)

The drawing shows a top-down view of the attenuator with the following dimensions and features:

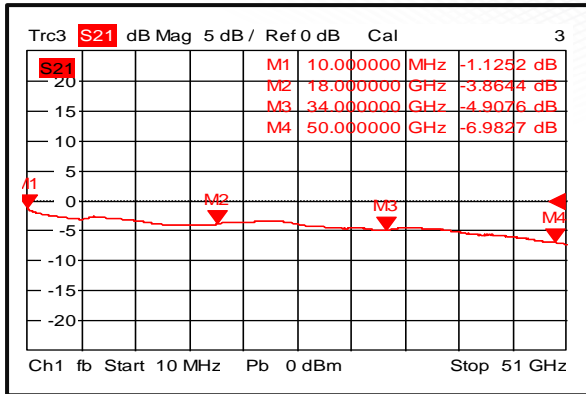
- Top length: 6 [0.24]
- Left side length: 3 [0.12]
- Bottom length: 18 [0.71]
- Bottom width: 14.6 [0.57]
- Internal width: 14.6 [0.57]
- Distance from top edge to center of mounting holes: 3.5 [0.14]
- Mounting holes: 4- ϕ 2.2 [0.09] THRU
- Labels on the device: IN, RFECHO, F:0.01-50GHz, SN:XXXXXXXXXX, OUT, Vseries, Vshunt, GND

Voltage Control Table

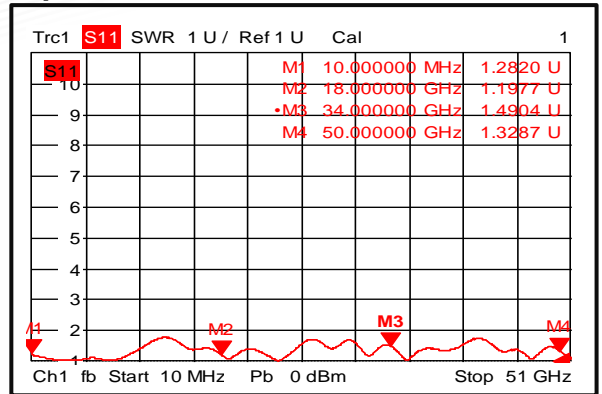
Vseries (V)	Vshunt (V)	Attenuation(dB)
0.5	-1	0
-0.36	-0.81	2
-0.43	-0.76	4
-0.66	-0.72	8
-0.77	-0.62	16
-0.81	-0.53	24
-0.91	-0.44	28
-1	0	34



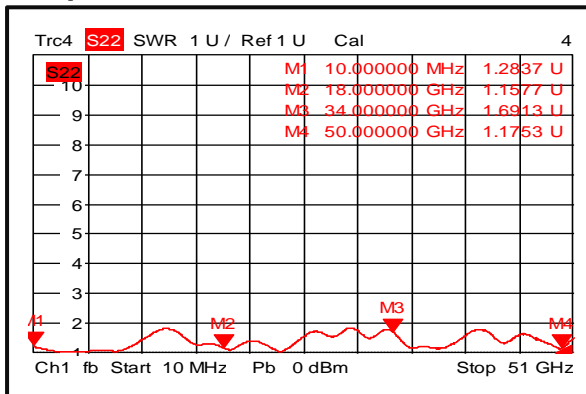
Insertion Loss @+25°C



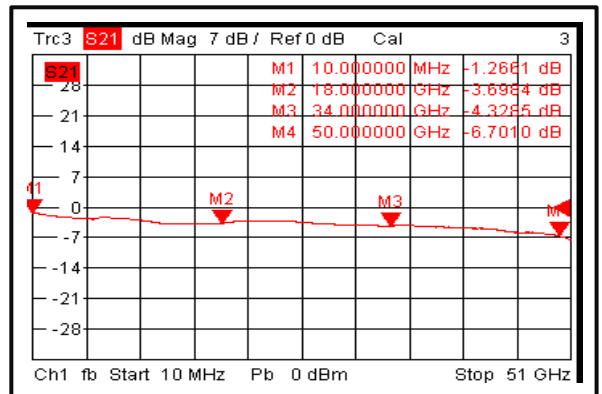
Input VSWR @+25°C



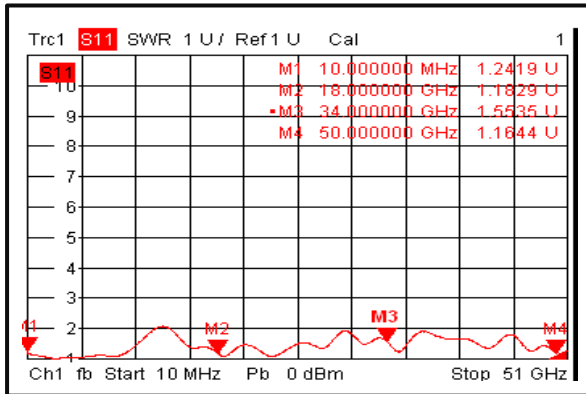
Output VSWR @+25°C



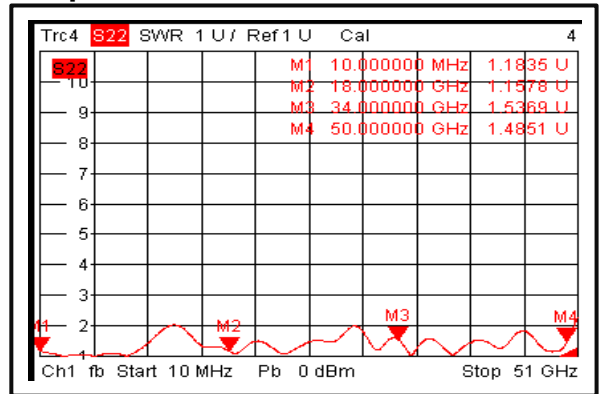
Insertion Loss @-45°C



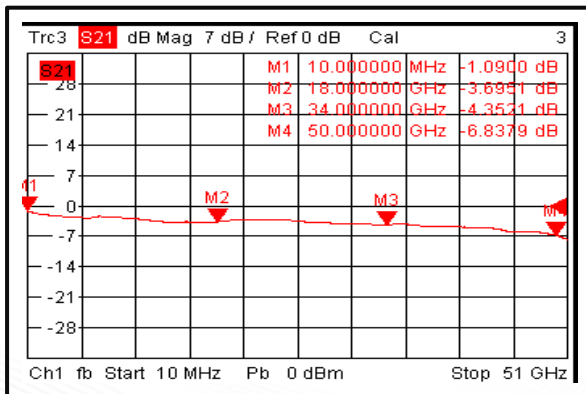
Input VSWR @-45°C



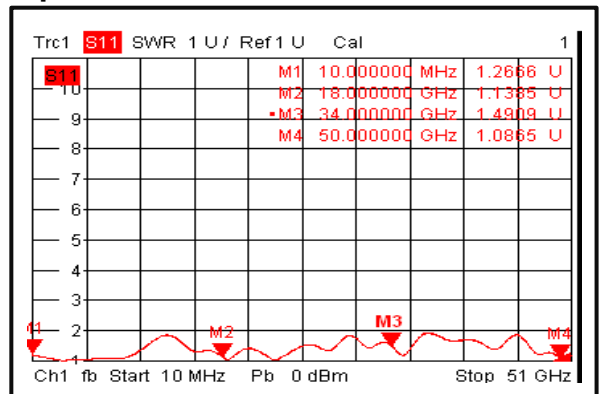
Output VSWR @-45°C



Insertion Loss @+85°C

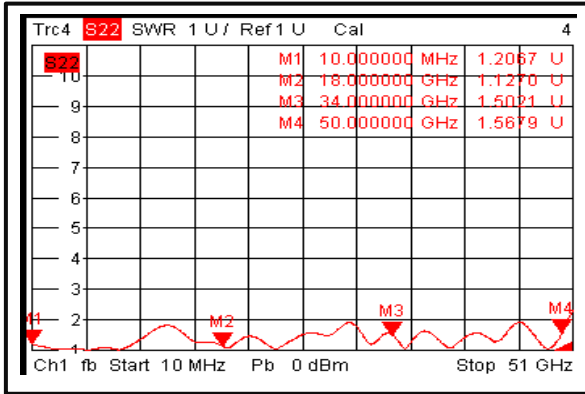


Input VSWR @+85°C

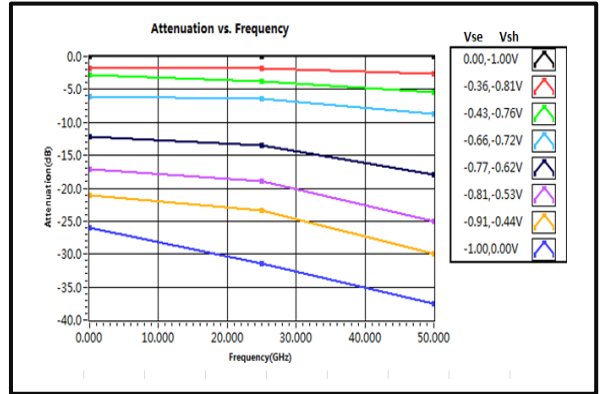




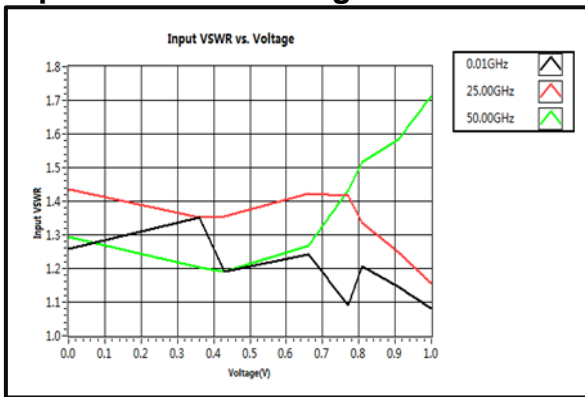
Output VSWR @+85°C



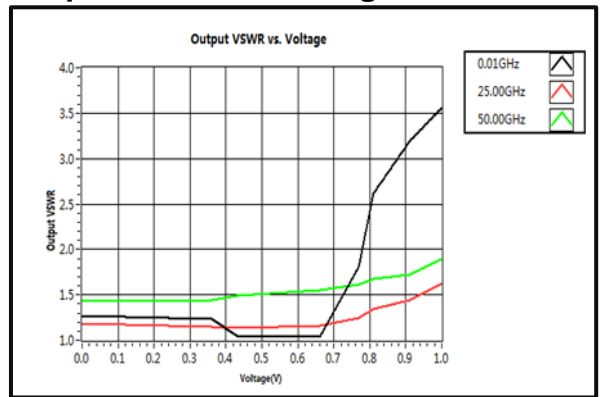
Attenuation vs. Frequency



Input VSWR vs. Voltage



Output VSWR vs. Voltage



Phase Shift vs. Frequency

