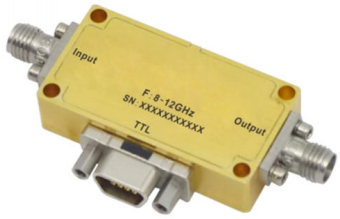
Absorptive Digital Control Attenuator 8-12GHz

Features

- Wide Band Operation 8-12GHz
- 1dB LSB Steps to 63dB
- Single Positive Control Line Per Bit
- Customization available upon



Parameters	Min.	Typ.	Max.	Units
Frequency Range	8		12	GHz
Attenuation Range			63	dB
Attenuation Flatness: (Referenced to Insertion Loss)		±2.5		dB
Control Bits			6	Bit
Control Step size	1			dB
Insertion Loss		5.3	6.5	dB
Insertion Loss Temperature Coefficient		0.005		dB/ °C
Input VSWR(All Atten. States)		1.4	1.8	: 1
Output VSWR (All Atten. States)		1.4	1.8	: 1
Input Power for 0.1 dB Compression	30			dBm
IP3 Input	45			dBm
Switching Speed	150			ns
Weight	1.41			ounces
Impedance	50			Ω
Bias Current (+5V/-5V)	130/130			mA
Input /Output Connectors	SMA-Female			
Interface and control connertor	MICRO-D9(Female)			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (optional)			

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2~5V
RF Input power	+30dBm

Environmental Specifications

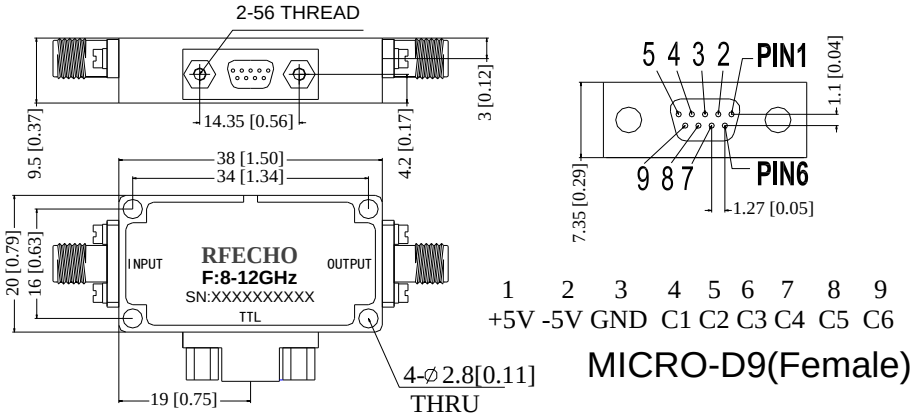
Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH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

Ordering Information

Part No.	Description
DBDA0608001200A	8-12GHz Digital Control Attenuator

Outline Drawing:

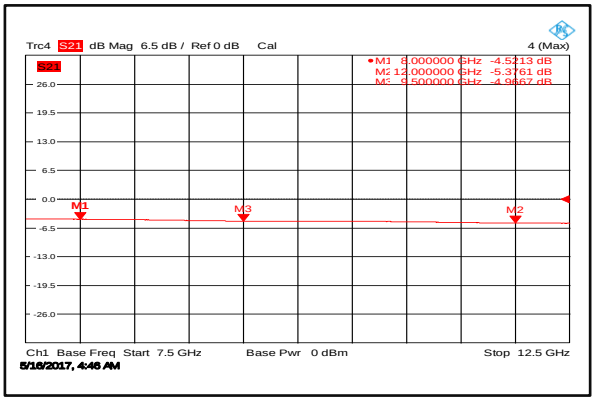
All Dimensions in mm (inches)



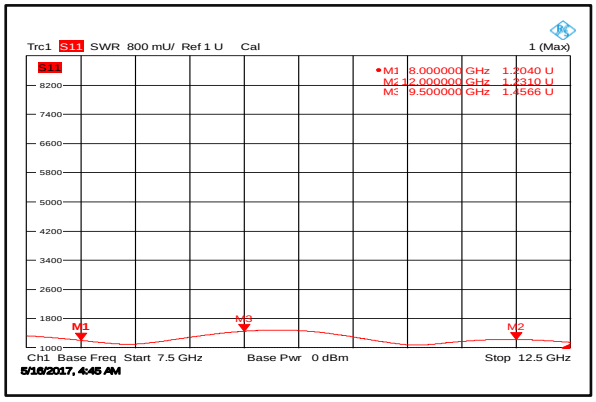
TruthTable

Control Voltage Input						Attenuation state
C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	Reference IL
1	1	1	1	1	0	1dB
1	1	1	1	0	1	2dB
1	1	1	0	1	1	4dB
1	1	0	1	1	1	8dB
1	0	1	1	1	1	16dB
0	1	1	1	1	1	32dB
0	0	0	0	0	0	63dB

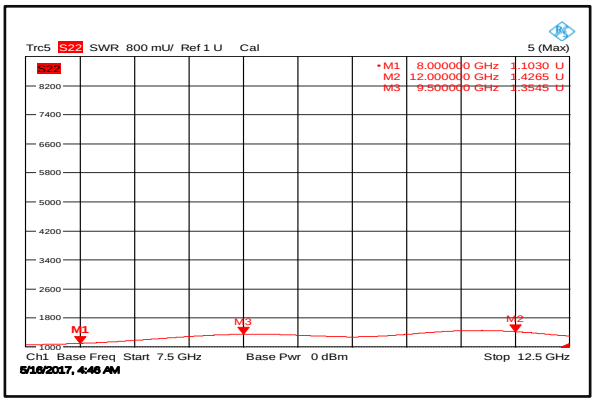
Insertion Loss @+25℃



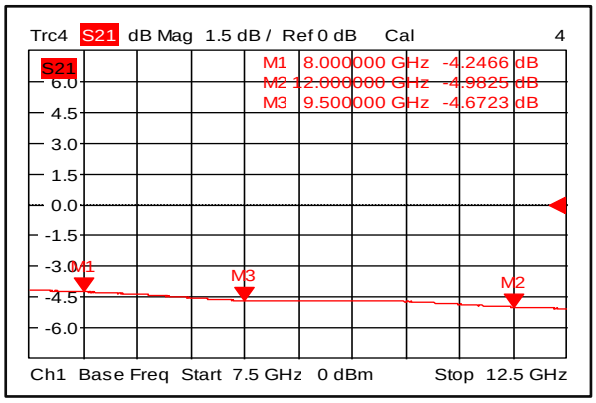
Input VSWR @+25℃



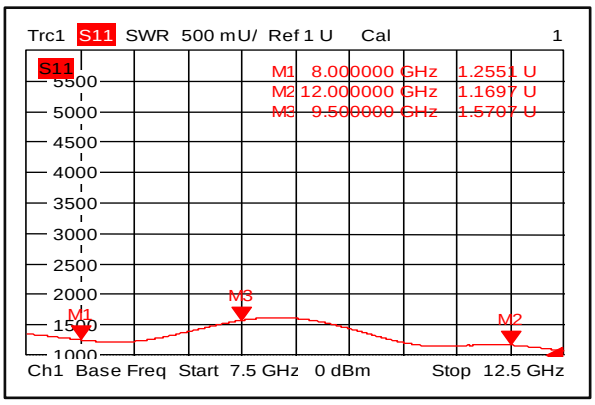
Output VSWR @+25℃



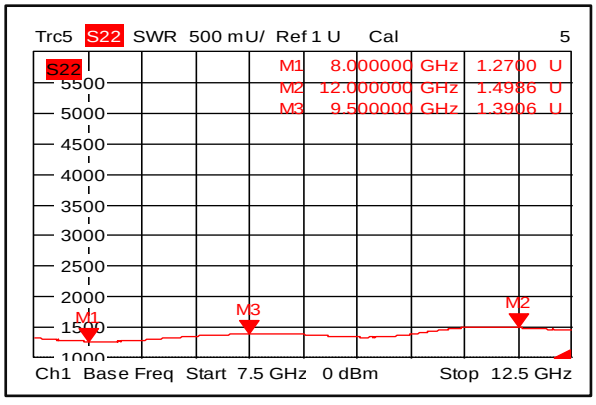
Insertion Loss @-40℃



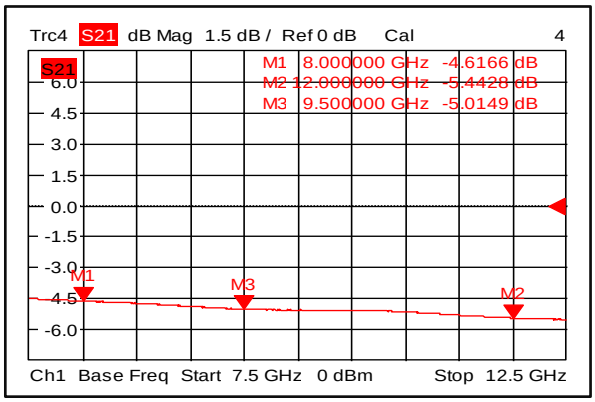
Input VSWR @-40℃



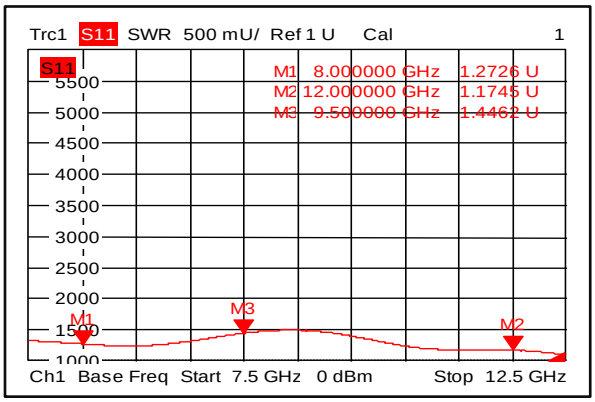
Output VSWR @-40℃



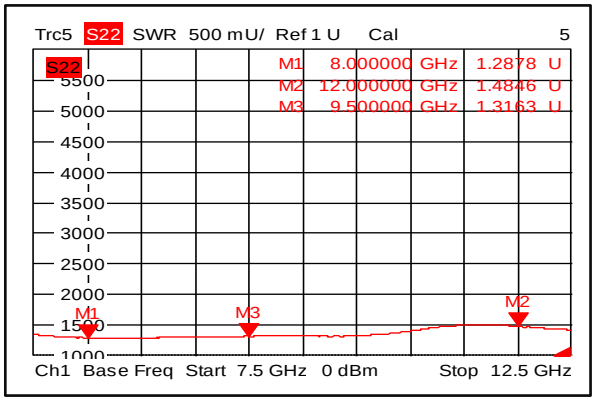
Insertion Loss @+85℃



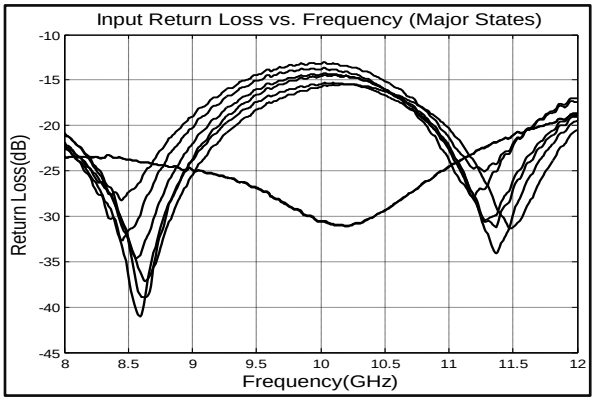
Input VSWR @+85℃



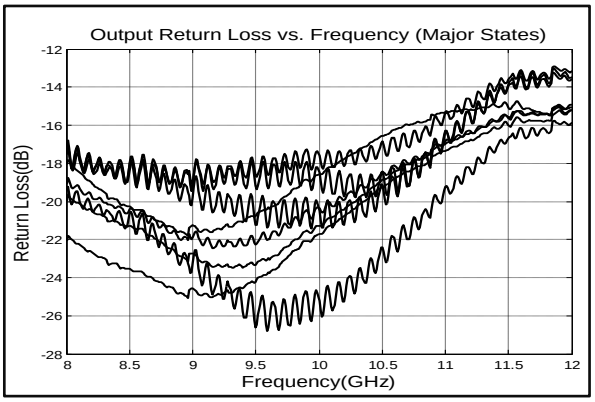
Output VSWR @+85℃



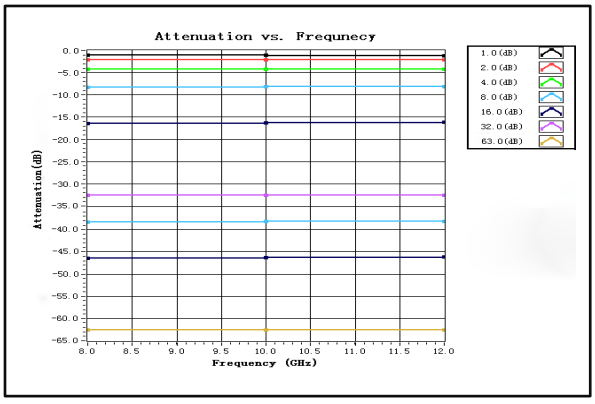
Input Return Loss vs. Frequency



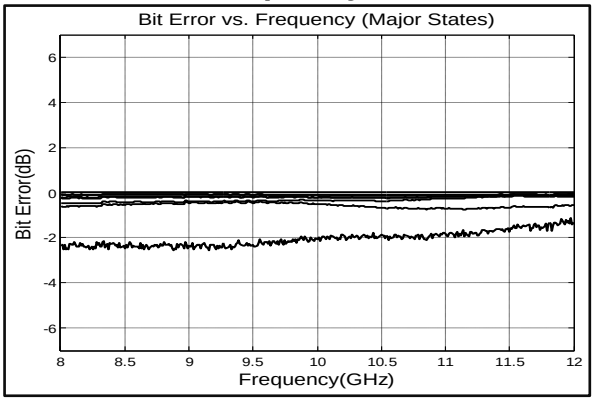
Output Return Loss vs. Frequency



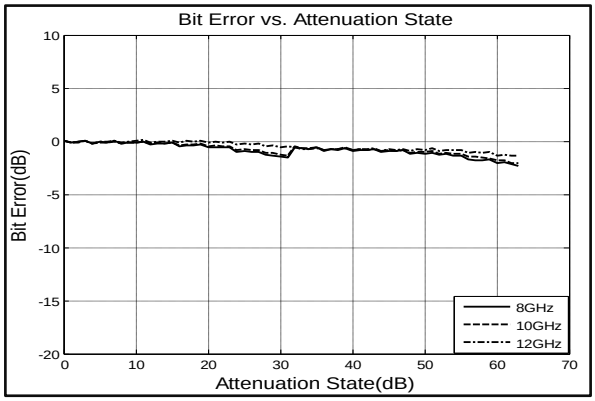
Attenuation Flatness vs.Frequnecy



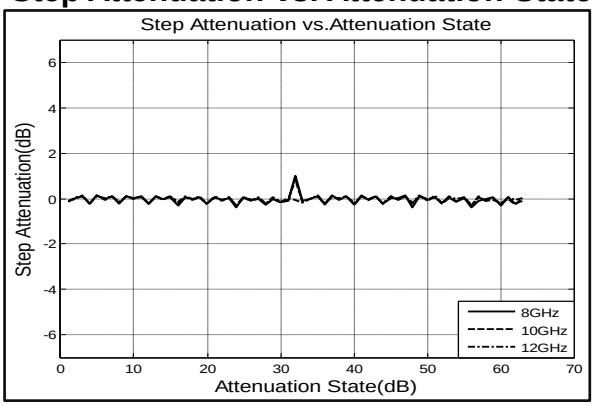
Bit Error vs. Frequency



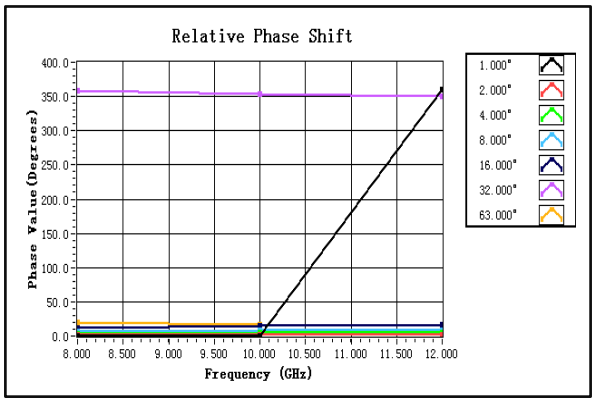
Bit Error vs. Attenuation State



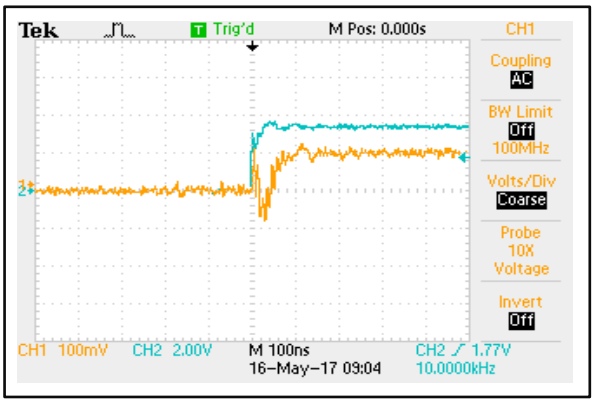
Step Attenuation vs. Attenuation State



Relative Phase Shift



Speed



Speed