

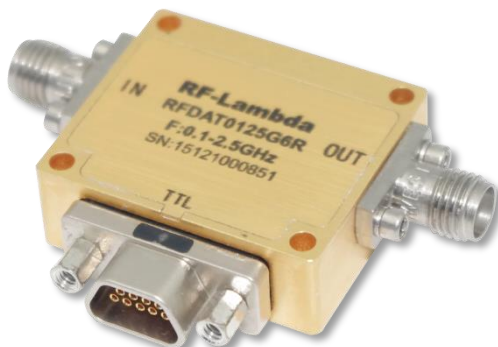


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFDAT0125G6R

Absorptive Digital Control Attenuator 0.1 - 2.5GHz



Features

- Wide Band Operation 0.1-2.5GHz
- 0.5dB LSB Steps to 31dB
- Single Positive Control Line Per Bit
- Customization available upon request

Electrical Specifications, TA = +25° C, With Vdd = +5V, VCTL = 0/ +5V

Description	PN:RFDAT0125G6R			
	Absorptive Digital Attenuator			
Parameters	Min	Typ.	Max	Units
Frequency Range	0.1-2.5			GHz
Attenuation Range			31.5	dB
Attenuation Flatness: (Referenced to Insertion Loss)		±2		dB
Control Bits			6	Bit
Control Step size	0.5			dB
Insertion Loss		1.9	2.0	dB
Insertion Loss Temperature Coefficient		0.005		dB/°C
Input VSWR(All Atten. States)		1.6	1.8	: 1
Output VSWR (All Atten. States)		1.6	1.8	: 1
Input 0.1 dB Compression Point (Po.1dB)	30			dBm
IIP3		43		dBm
Switching Speed			100	ns
Weight	1.1			ounces
Impedance	50			Ω
Bias Current (+5v)	10			mA
Input / Output Connectors	SMA-Female			
Interface and Control Connector	MICRO-D9			
Finishing	Gold Plating			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absorptive Digital Control Attenuator 0.1 - 2.5GHz



Absolute Maximum Ratings

Biasing	+5V±10%
TTL Control Voltage	0~0.8V/2~5V

Ordering Information

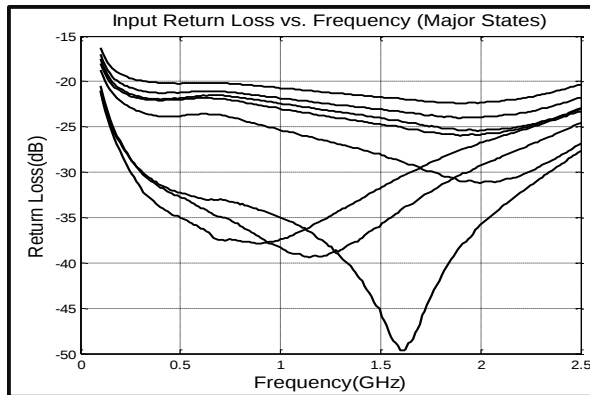
Part No.	ECCN	Description
RFDAT0125G6R	EAR99	0.1-2.5GHz Digital Control Attenuator

Environmental Specifications

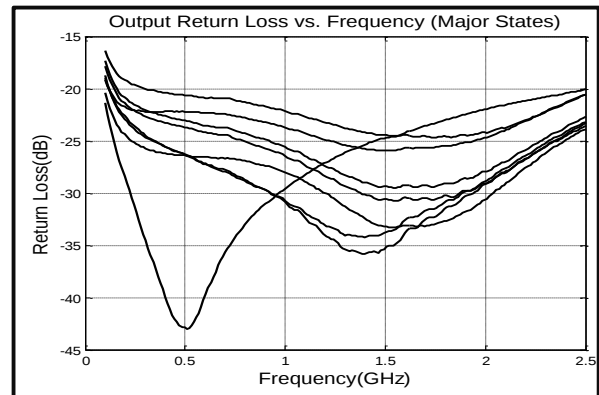
Operational Temperature(°C)	-45 ~ +85
Storage Temperature(°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Typical Performance Plots

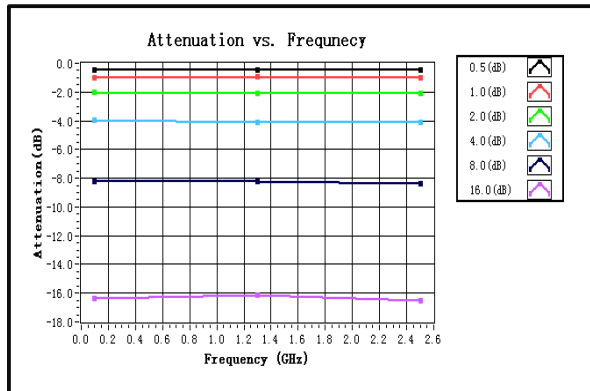
Input Return Loss vs. Frequency



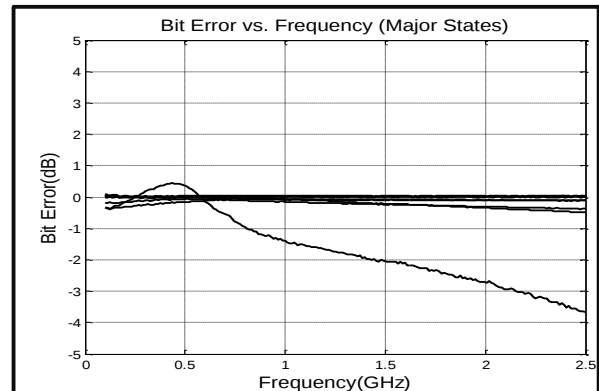
Output Return Loss vs. Frequency



Attenuation vs. Frequency

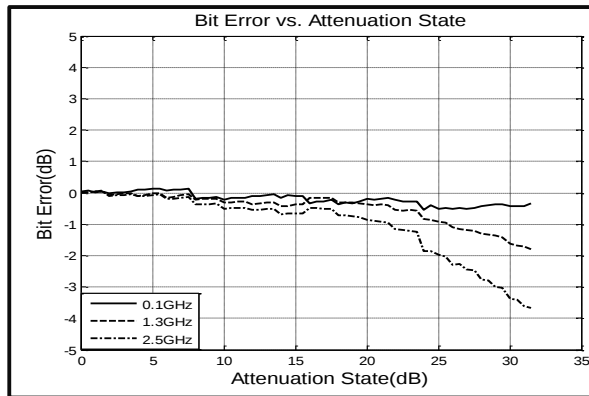


Bit Error vs. Frequency

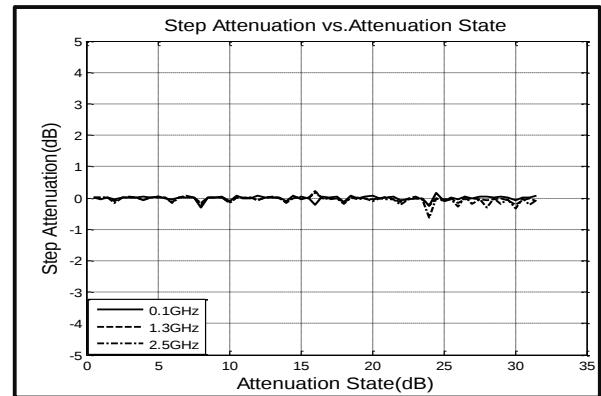




Bit Error vs. Attenuation State



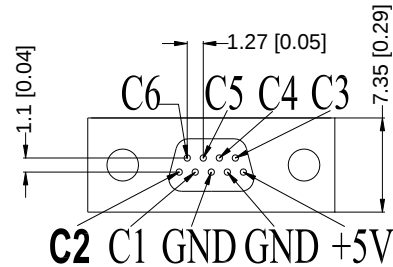
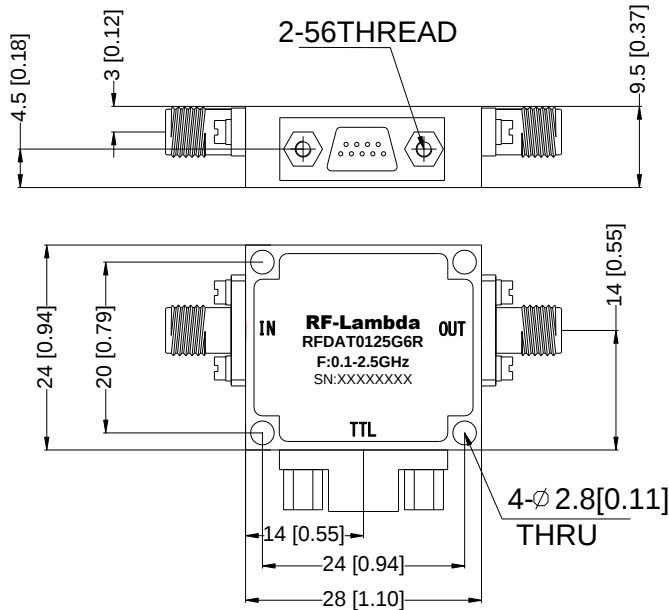
Step Attenuation vs. Attenuation State





Outline Drawing:

All Dimensions in mm [inches]



MICRO-D9 Female

Truth Table

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	0.5dB
1	1	1	1	0	1	1dB
1	1	1	0	1	1	2dB
1	1	0	1	1	1	4dB
1	0	1	1	1	1	8dB
0	1	1	1	1	1	16dB
0	0	0	0	0	0	31.5dB



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