



### USB / Ethernet Absorptive Digital Control Attenuator 0.1 - 2.5GHz



Note: The photo is for illustration purposes only.  
Please refer to outline drawing

#### Features

- Wide Band Operation 0.1-2.5GHz
- Functional Bandwidth : 0.1GHz – 3.2GHz
- USB Controlled and Powered
- 0.5dB LSB Steps to 127.5dB

#### Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

#### Electrical Specifications, TA = +25°C, USB Powered

Description	PN: RFDAT0125G8AUSB						
	Absorptive Digital Attenuator						
Parameters	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	0.1-2.5			2.5-3.2			GHz
Attenuation Range			127.5			127.5	dB
Attenuation Flatness: (Referenced to Insertion Loss)		±1.5			±1.5		dB
Control Bits			8			8	Bit
Control Step size	0.5			0.5			dB
Insertion Loss		7	7.5		7.8	8.5	dB
Insertion Loss Temperature Coefficient		0.005			0.005		dB/°C
Input VSWR (All States)		1.5	1.9		1.5	1.8	:1
Output VSWR (All States)		1.5	1.9		1.5	1.8	:1
Input 0.1 dB Compression Point (Po.1dB)		30			30		dBm
RF Input power		30			30		dBm
Input IP3		50			48		dBm
Weight	1.76						ounces
Impedance	50						Ω
Bias Current	210						mA
Power Supply	USB(+5.0V)						
Input / Output Connectors	SMA - Female						
Control Interface	USB2.0 & Ethernet(IPv4) (Control Cable Included)						
Finish	Nickel Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						



**Ordering Information**

Part No.	Description
RFDAT0125G8AUSB	0.1-2.5GHz Digital Control Attenuator

**Environmental Specifications and Test Standards**

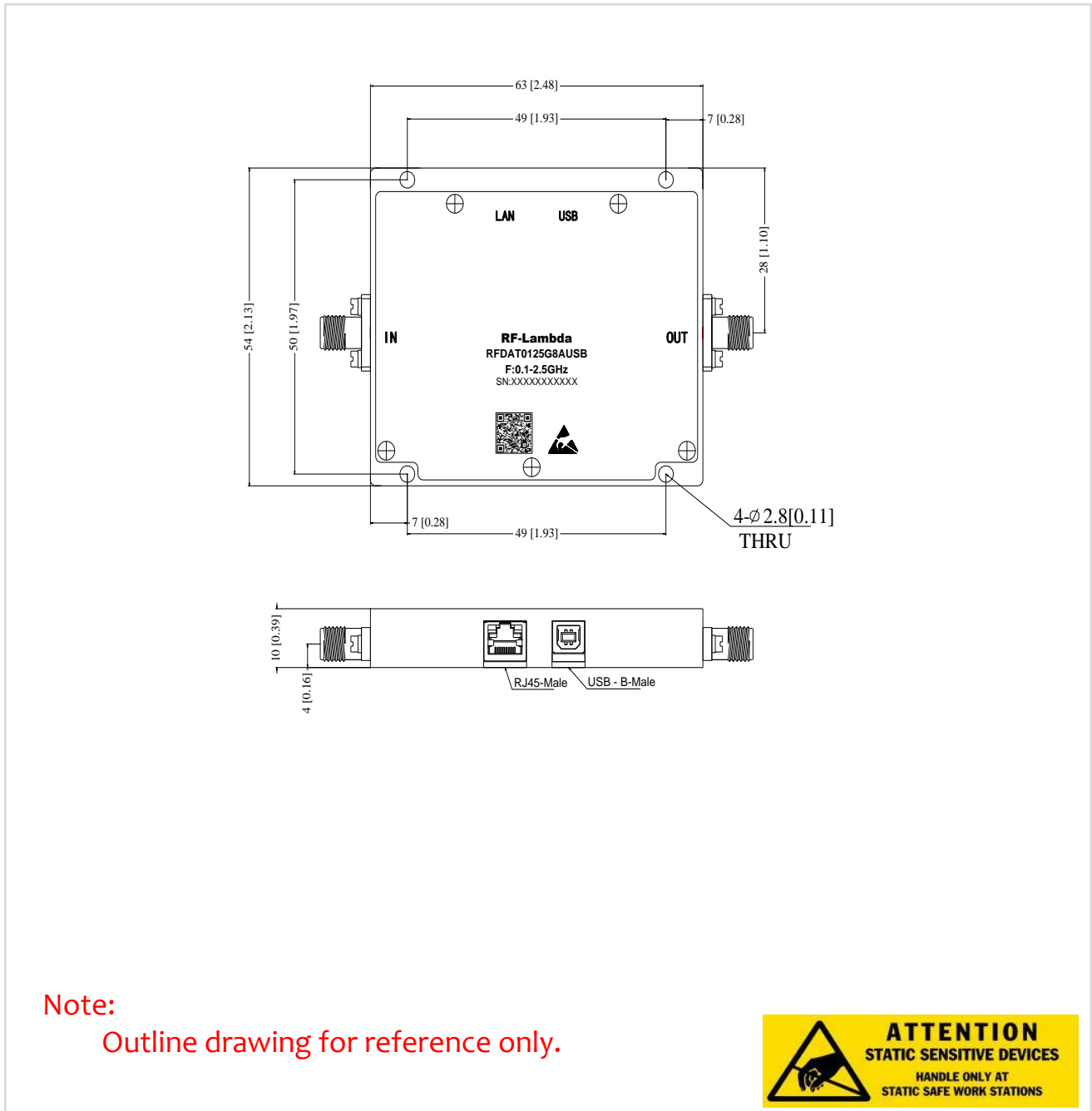
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-40°C~+85°C
Storage Temperature		-50°C~+105°C
Thermal Shock		1 Hour@ -40°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 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)

**USB / Ethernet Absorptive Digital Control Attenuator 0.1 - 2.5GHz**



**Outline Drawing:**

All Dimensions in mm [inches]



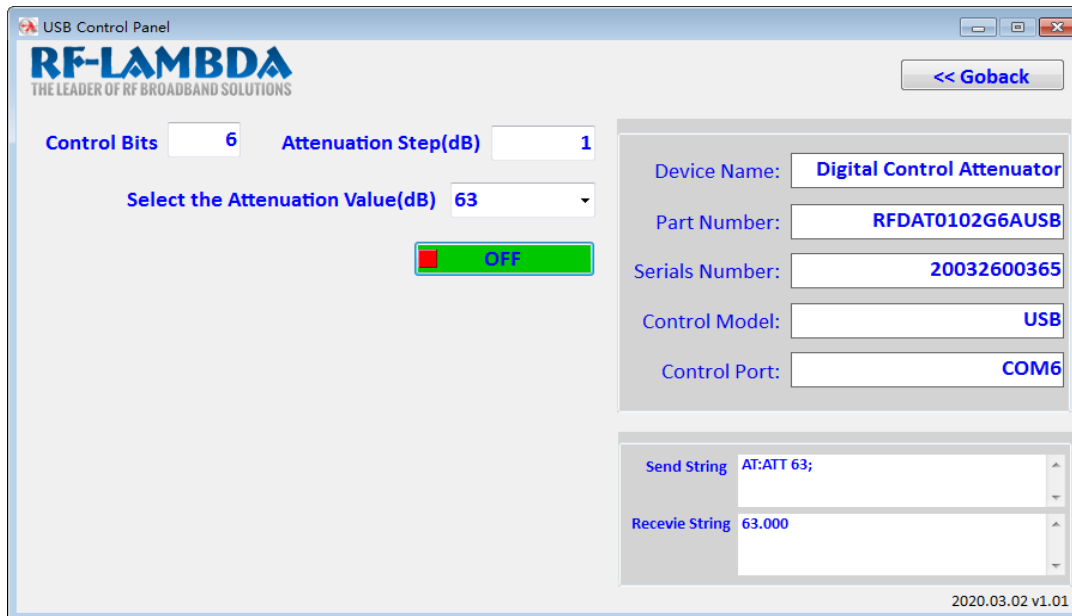
**USB / Ethernet Absorptive Digital Control Attenuator 0.1 - 2.5GHz**



Control Content Description			
Format Requirement	USB (virtual serial port ) Configuration	LAN Interface	Range of Parameters
a.All commands must end with a semicolon. b.All commands are case insensitive. c.Comma is used to separate multiple parameters in commands. d.All commands are suitable for USB(virtual serial port) and LAN interface.	Baud Rate :115200 Data bits : 8 Parity : None Stop bits : 1 Flow Type :None	IP address and Port. Default:192.168.1.225 :5100; use 'USB Control panel.exe' to update.	x(Step): 1~2^n,n is control bits.

Command Specification				
ID	Order	Description	Return	Example
1	*IDN?;	Query product information	Product PN ,SN, Manufacturer ,version	*IDN?;
2	Reset;	Reset the product	/	Reset;
3	AT:ATT x;	Set attenuation step	Attenuation value	AT:ATT 2; Return : 2*step size
4	AT:ATT?;	Query current attenuation value	Attenuation step, attenuation value	AT:ATT? Return :2, 2*step size
5	AT:ATTS?	Query attenuation step size	Attenuation step size	AT:ATTS? Return : step size

Error Code Query		
ID	Return	Description
1	E1	Missing semicolon
2	E2	Incorrect command
3	E3	Missing space character
4	E4	Out of range parameters





**USB Control Panel**

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Select Device

Digital Control Switch

Digital Control Attenuator

Control Interface

USB

ETHERNET   1

20

192.168.1.235 Device Port 5100

Connect Device

connected!

manual for power supply.

manual to configure the port.

**Ethernet Configuration**

Local IP Address 192.168.1.20 Refresh

ID	PN	SN
1	RFDAT0102G6AUSB	20040700161

Search Devices 2

Exit

IP address 192.168.1.235

Sub Mask 255.255.255.0

Gateway 192.168.1.1

labelPort 5100

Setting 4

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2020.03 v2.01

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