



Absorptive Digital Control Attenuator 12-18GHz



Features

- Wide Band Operation 12-18GHz
- 1dB LSB Steps to 63dB
- Single Positive Control Line Per Bit
- Customization available upon request

Parameters	Min.	Typ.	Max.	Units
Frequency Range		12-18		GHz
Attenuation Range		63		dB
Attenuation Flatness: (Referenced to Insertion Loss)		±3.0	±3.5	dB
Control Bits			6	Bit
Control Step Size		1		dB
Insertion Loss		11.5	12.5	dB
Insertion Loss Temperature Coefficient		0.005		dB/ °C
Input VSWR (All Atten. States)		1.5	1.8	: 1
Output VSWR (All Atten. States)		1.5	1.8	: 1
Input 0.1dB Compression Point (P0.1dB)		27		dBm
IP3 Input(0dBm)		43		dBm
Switching Speed 50% CTRL* to 90% or 10%		100 Max.		ns
Weight		3.2Typ.		ounces
Impedance		50		Ω
Bias Current (+5V /- 5V)		200/150 Max.		mA
Input / Output Connectors		SMA-Female		
Interface and Control Connector		MICRO-D9 (Female)		
Finish		Gold Plated		
Material		Aluminum		
Sealing		Hermetically Sealed (Optional)		



Absolute Maximum Ratings

Biasing	+5v / -5v ± 10%
RF Input Power	+27dBm

Environmental Specifications

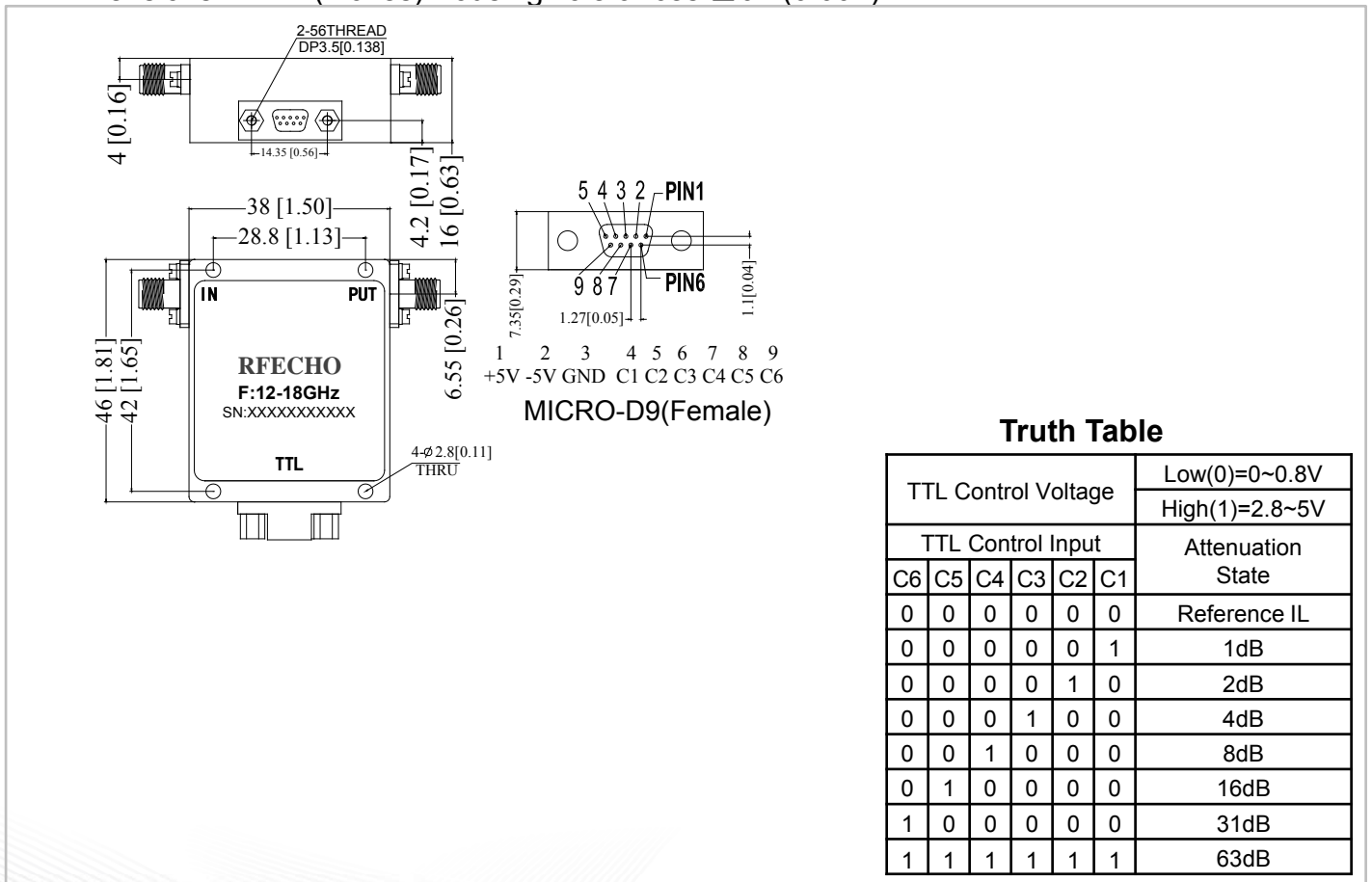
Operational Temperature	-40°C~+85°C
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH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

Ordering Information

Part No.	Description
DBDA0612001800A	12-18GHz Digital Control Attenuator

Outline Drawing:

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



Truth Table

TTL Control Voltage						Low(0)=0~0.8V
TTL Control Input						High(1)=2.8~5V
C6	C5	C4	C3	C2	C1	Attenuation State
0	0	0	0	0	0	Reference IL
0	0	0	0	0	1	1dB
0	0	0	0	1	0	2dB
0	0	0	1	0	0	4dB
0	0	1	0	0	0	8dB
0	1	0	0	0	0	16dB
1	0	0	0	0	0	31dB
1	1	1	1	1	1	63dB