



Absolute Maximum Ratings

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

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
DBDA0703001800A	3-18GHz Digital Control Attenuator

Outline Drawing:

All Dimensions in mm (inches)

The drawing shows the physical dimensions of the attenuator. Key dimensions include: 18.2 [0.72] for the top width, 9.5 [0.37] and 3 [0.12] for the top-left section, 4.2 [0.17] for the top-right section, 36 [1.42] and 32 [1.26] for the bottom-left section, 38 [1.50] and 28.8 [1.13] for the main body width, 6.55 [0.26] for the bottom-right section, and 4-Ø2.8 [0.11] THRU for the mounting holes. A 2-56THREAD hole is also indicated.

The MICRO-D15-Female connector pinout is shown as follows:

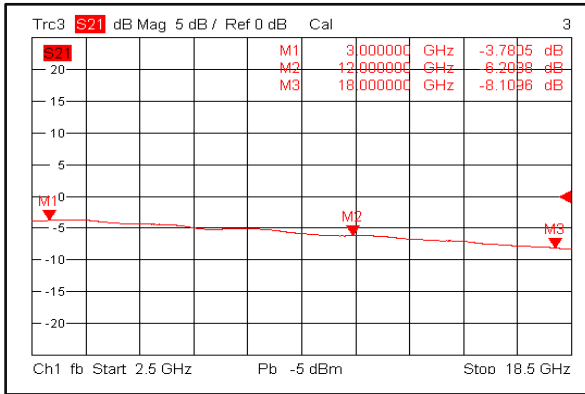
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
+5V	GND	-5V	C1	C2	C3	C4	C5	C6	C7	C8	GND	GND	GND	GND

Truth Table

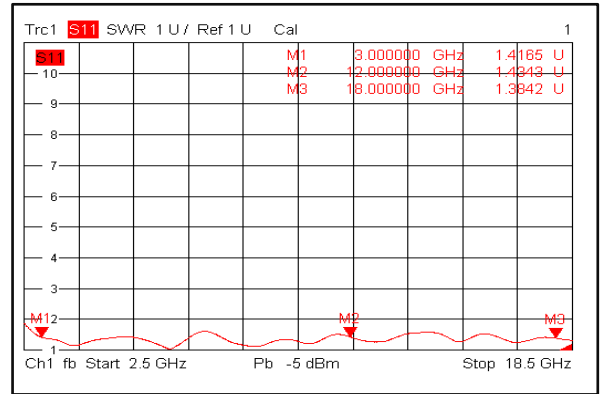
Control Voltage Input							Attenuation state
C7	C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	1	Reference IL
1	1	1	1	1	1	0	0.5dB
1	1	1	1	1	0	1	1dB
1	1	1	1	0	1	1	2dB
1	1	1	0	1	1	1	4dB
1	1	0	1	1	1	1	8dB
1	0	1	1	1	1	1	16dB
0	1	1	1	1	1	1	32dB
1	1	1	1	1	1	1	63.5dB



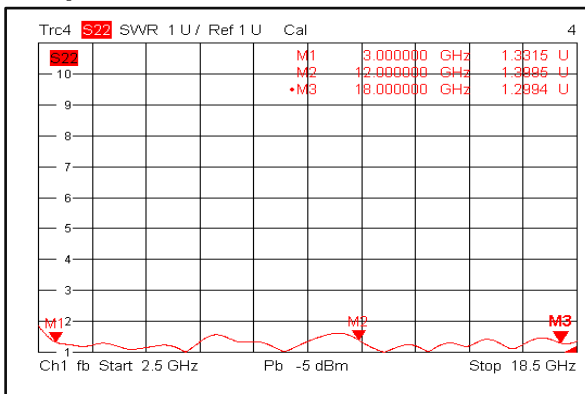
Insertion Loss @+25°C



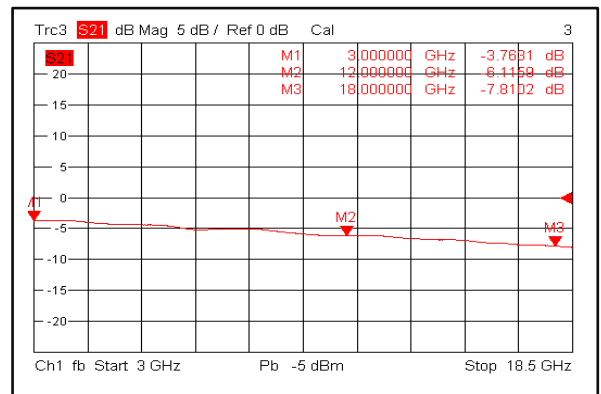
Input VSWR @+25°C



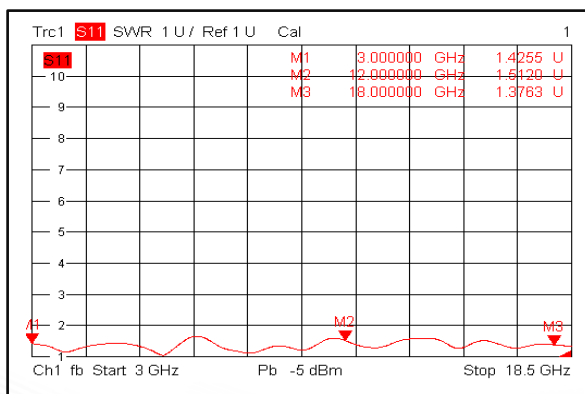
Output VSWR @+25°C



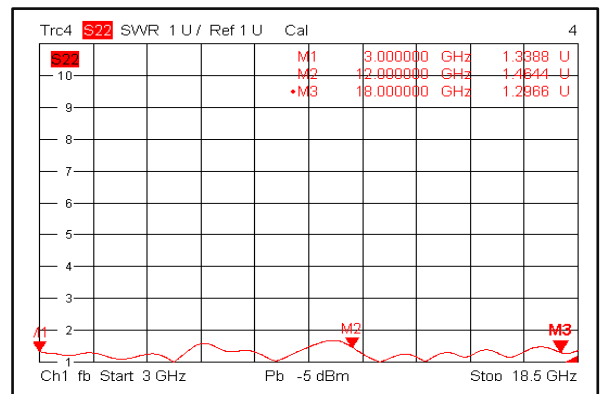
Insertion Loss @-40°C



Input VSWR @-40°C

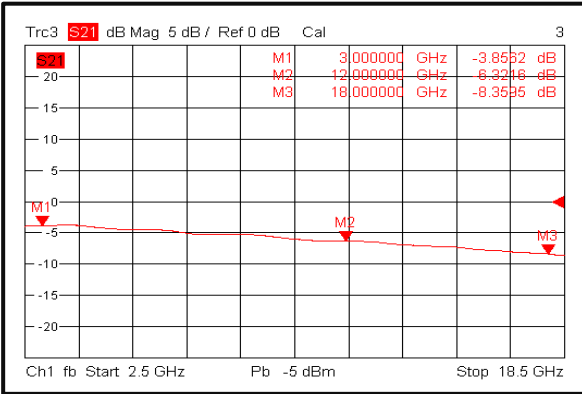


Output VSWR @-40°C

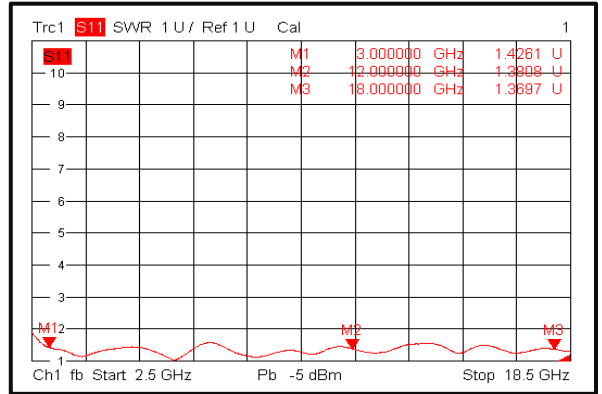




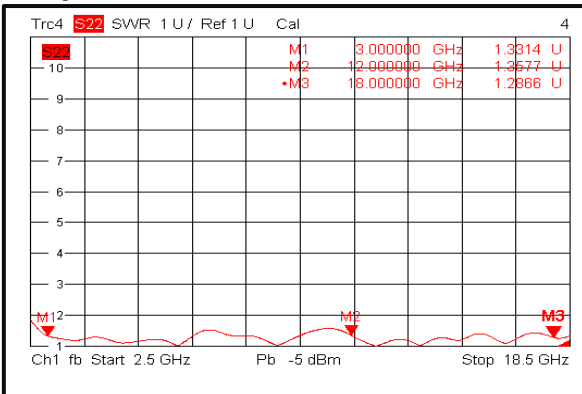
Insertion Loss @+85°C



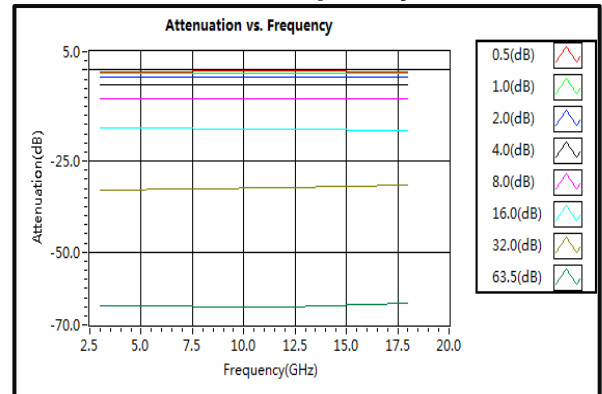
Input VSWR @+85°C



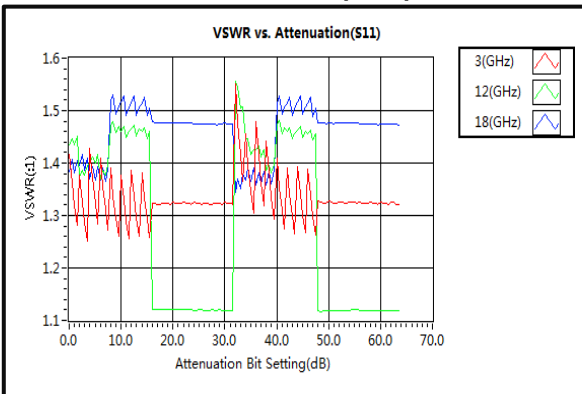
Output VSWR @+85°C



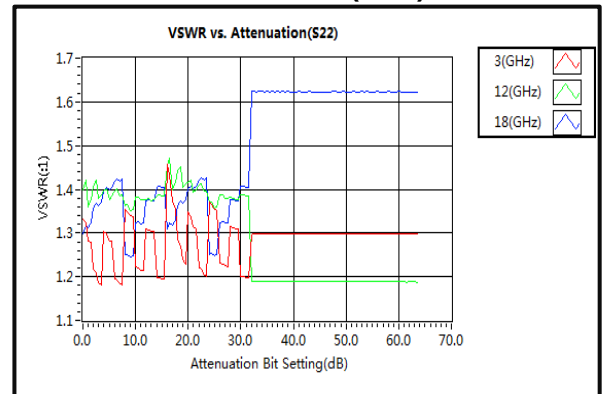
Attenuation vs. Frequency



VSWR vs. Attenuation(S11)

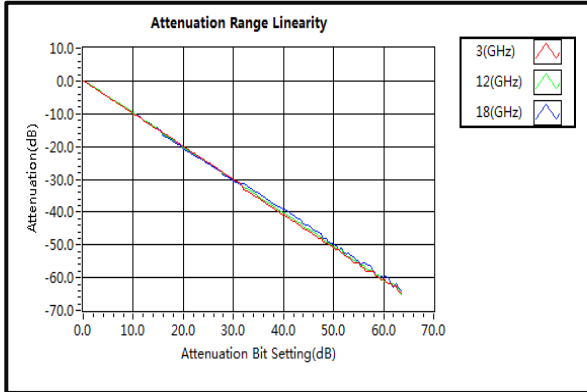


VSWR vs. Attenuation(S22)

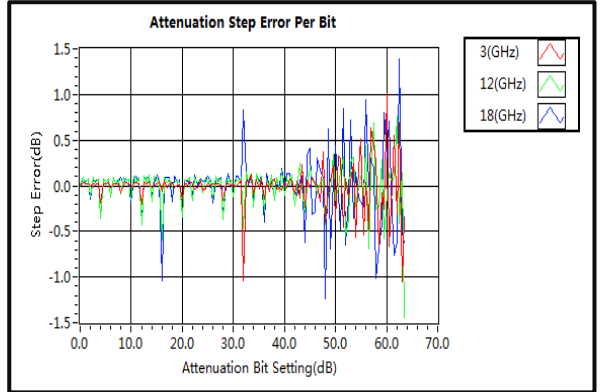




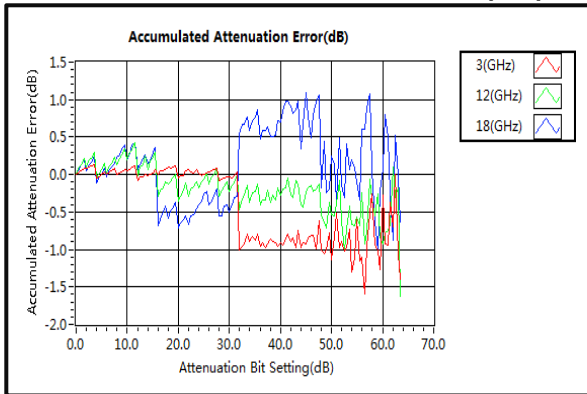
Attenuation Range Linearity



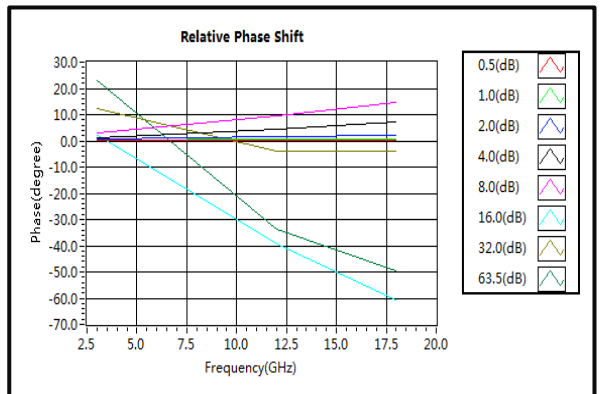
Attenuation Step Error Per Bit (dB)



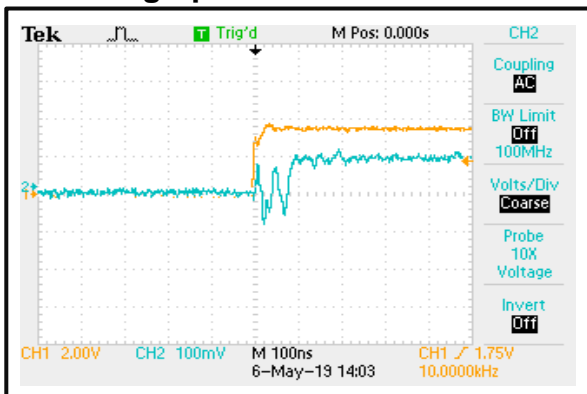
Accumulated Attenuation Error(dB)



Relative Phase Shift



Switching Speed



Switching Speed

