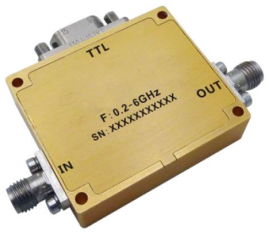
Absorptive Digital Control Attenuator 0.2-6GHz

Features

- Wide Band Operation 0.2-6GHz
- Functional Bandwidth : 0.1GHz to 7GHz
- 0.25dB LSB Steps to 31.75dB
- Single Positive Control Line Per Bit



Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.2		1.5	1.5		4.5	4.5		6	GHz
Attenuation Range	29	31.0		30	31.75		30	31.75		dB
Attenuation Flatness: (Referenced to Insertion Loss)		±1.0			±1.0			±1.0		dB
Control Bits	7									Bit
Control Step Size		0.25			0.25			0.25		dB
Insertion Loss		1.6	2.0		2.6	3.0		3.5	4.0	dB
Insertion Loss Temperature Coefficient		0.01			0.01			0.01		dB/ °C
Input VSWR (All States)		1.3	1.8		1.3	1.5		1.5	1.8	: 1
Output VSWR (All States)		1.3	1.8		1.3	1.5		1.5	1.8	: 1
Input Linearity 0.1dB Compression Point (P0.1dB)		30			30			30		dBm
Input Third-Order Intercept(OIP3) @Two-tone input power = 16 dBm/tone, Δf = 1 MHz		54			54			54		dBm
Switching Speed 50% CTRL* to 90% or 10%			250			250			250	ns
Weight	1.25 Max.									ounces
Impedance	50									Ω
Bias Current (+5V)	20 Max.									mA
Input / Output Connectors	SMA - Female									
Interface and Control Connector	MICRO-D15 (Female)									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

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Absolute Maximum Ratings

Biasing	+5V/-5V±10%
RF Input Power	+25dBm

Environmental Specifications

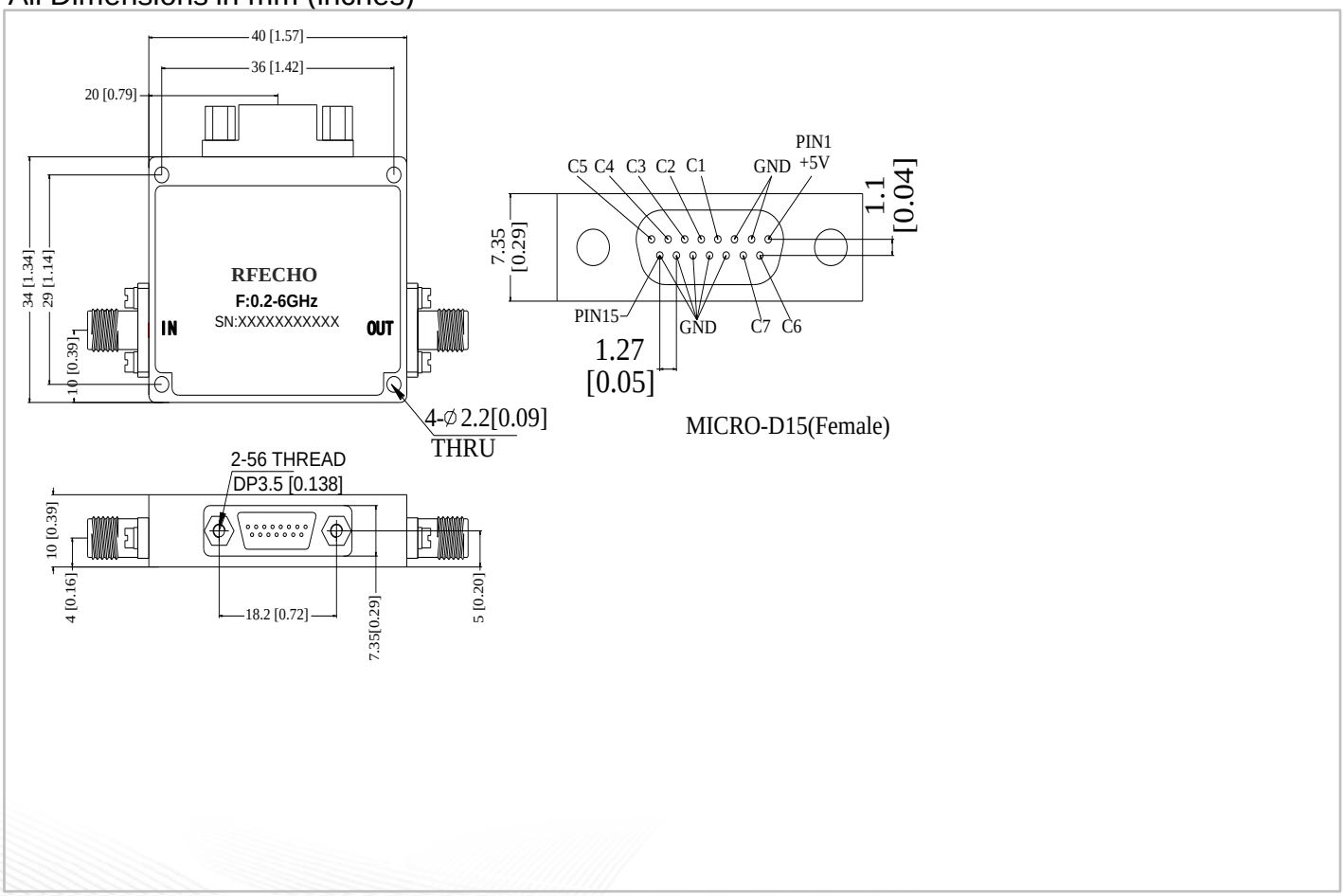
Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH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

Ordering Information

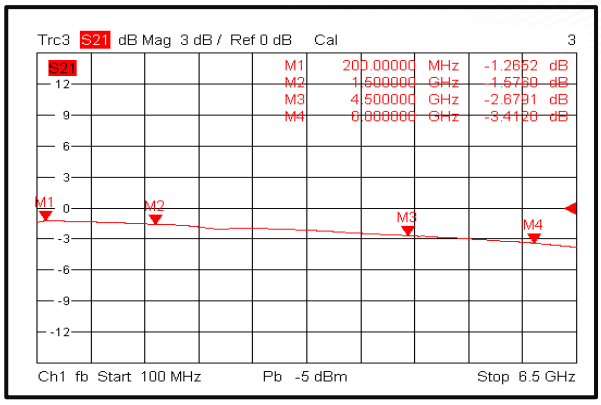
Part No.	Description
DBDA0701500450A	0.2-6GHz Digital Control Attenuator

Outline Drawing:

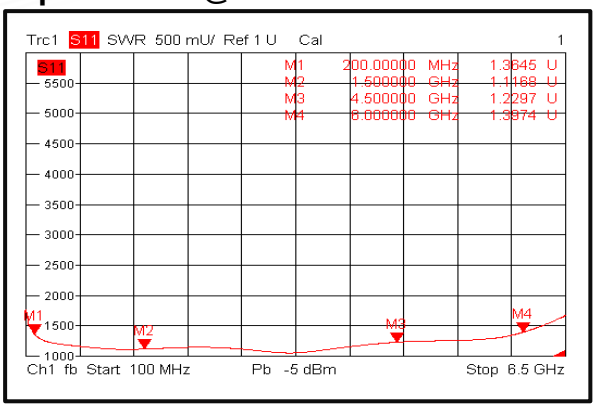
All Dimensions in mm (inches)



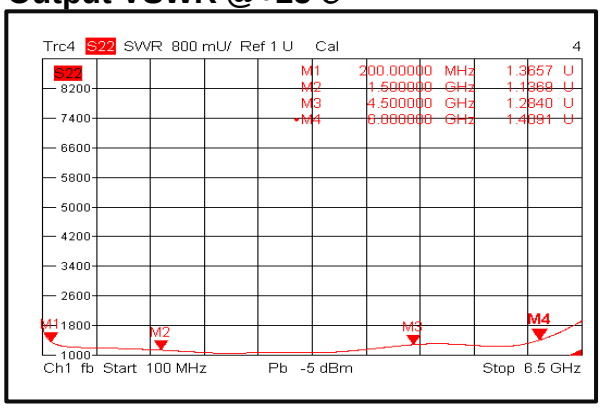
Insertion Loss @+25℃



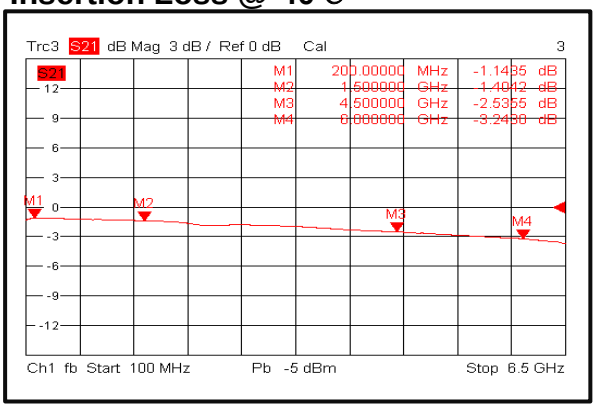
Input VSWR @+25℃



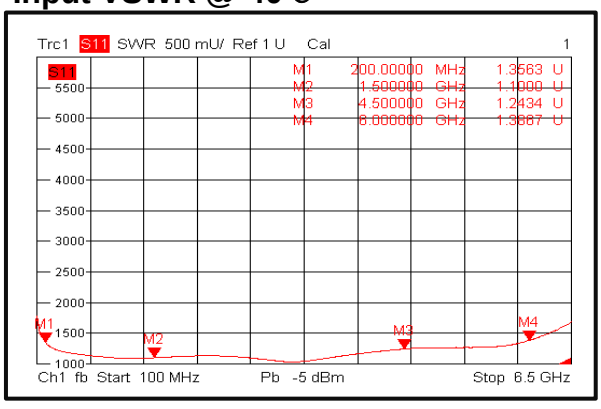
Output VSWR @+25℃



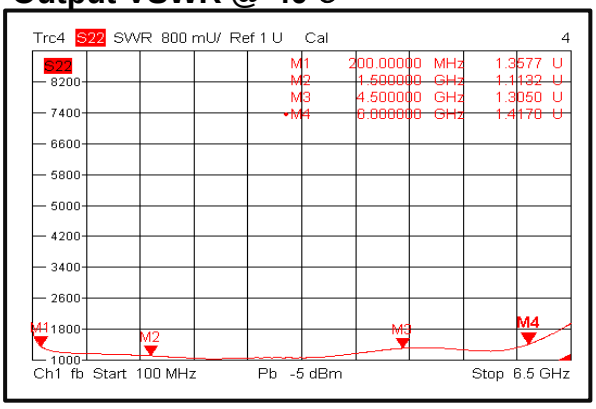
Insertion Loss @-40℃



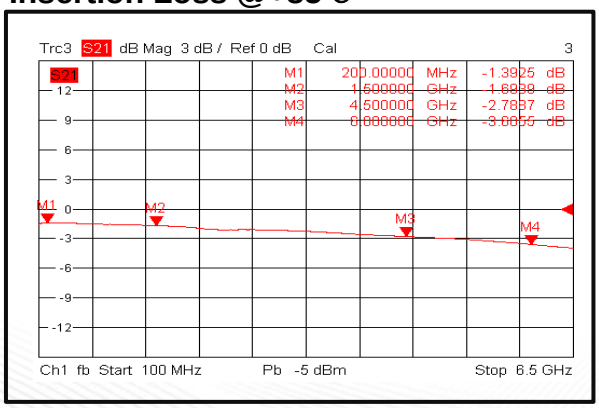
Input VSWR @-40℃



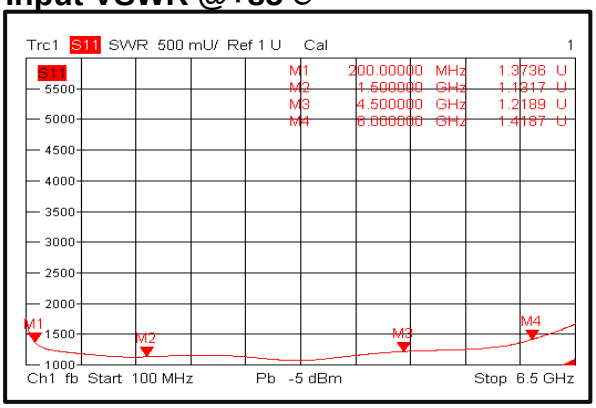
Output VSWR @-40℃



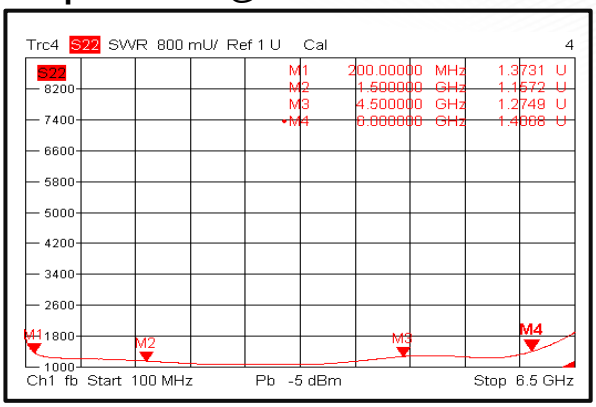
Insertion Loss @+85℃



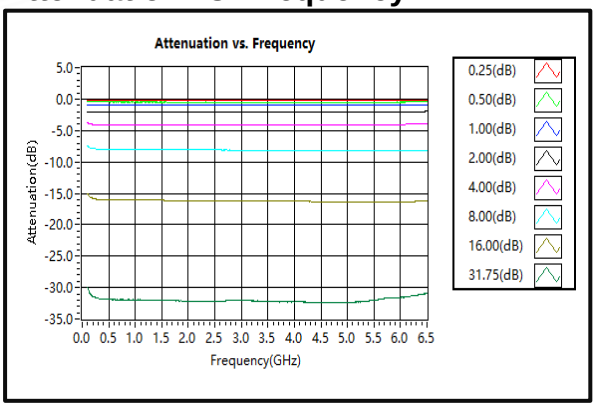
Input VSWR @+85℃



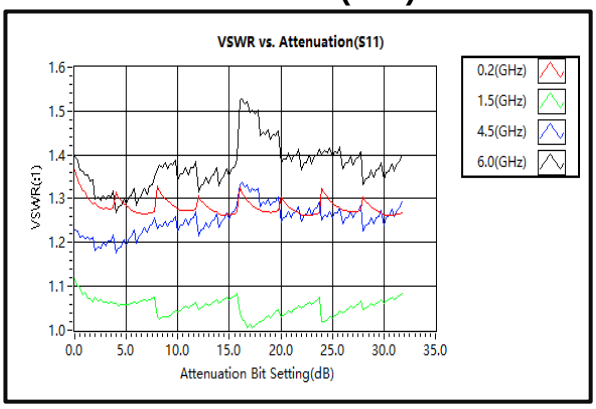
Output VSWR @+85℃



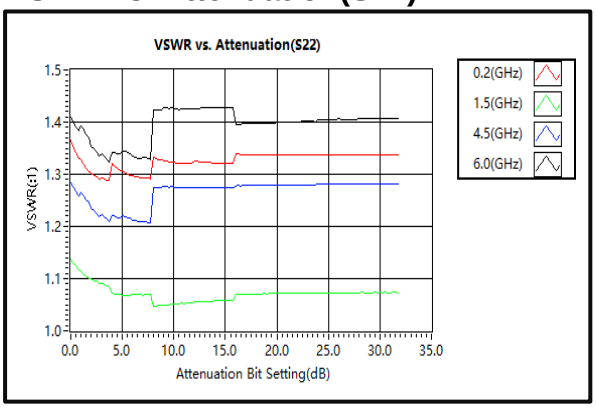
Attenuation vs. Frequency



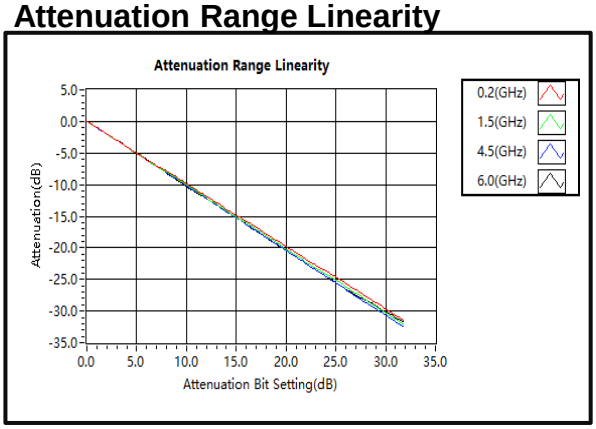
VSWR vs. Attenuation(S11)



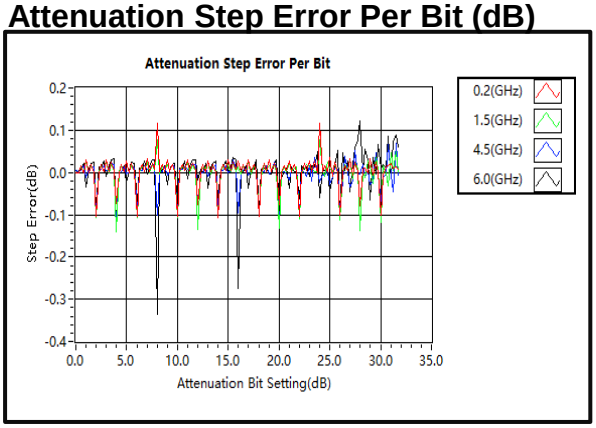
VSWR vs. Attenuation(S22)



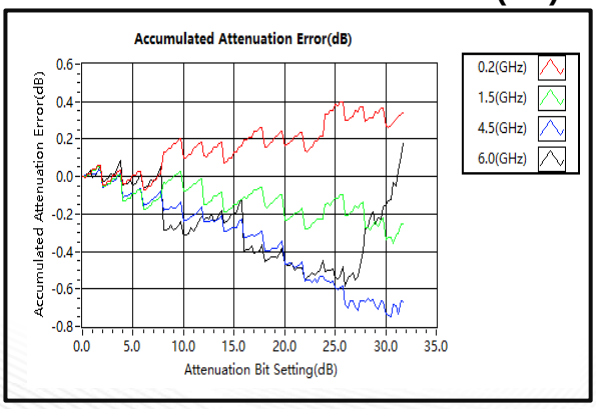
Attenuation Range Linearity



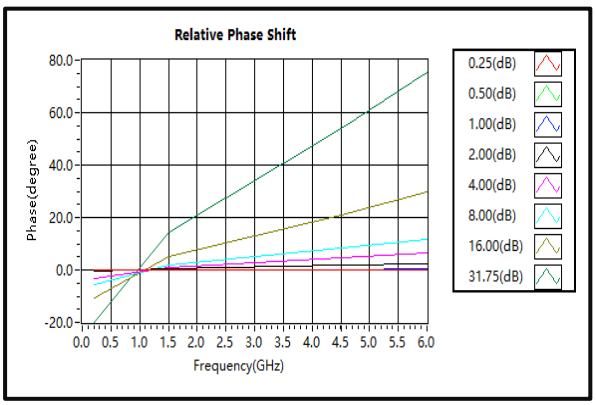
Attenuation Step Error Per Bit (dB)



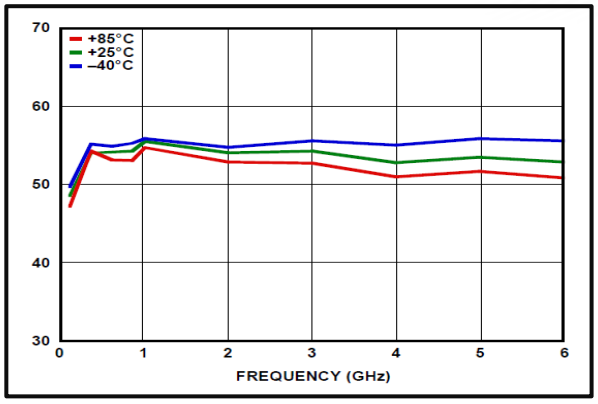
Accumulated Attenuation Error (dB)



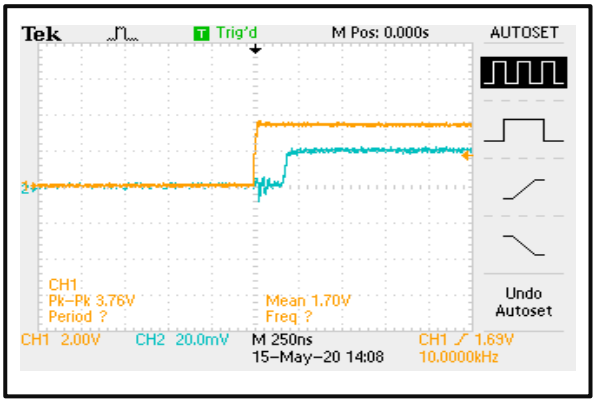
Relative Phase Shift



IIP3



Speed



Speed