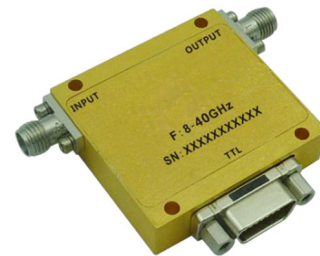




# Absorptive Digital Control Attenuator 8 - 40GHz

## Features

- Wide Band Operation 8-40GHz
- 0.5dB LSB Steps to 63.5dB
- Single Positive Control Line Per Bit
- Customization available upon request



Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	8-18			18-26.5			26.5-40			GHz
Attenuation Range			63.5			63.5			63.5	dB
Attenuation Flatness: (Referenced to Insertion Loss)		±2.0	±2.5		±2.5	±3.0		±3.0	±4.0	dB
Control Bits			7			7			7	Bit
Control Step size	0.5			0.5			0.5			dB
Insertion Loss		14.0	15.0		15.0	17.0		20.0	23.0	dB
Insertion Loss Temperature Coefficient			0.01			0.01		0.01		dB/ °C
Input VSWR (All States)		1.8	2.2		2.0	2.3		2.2	2.5	: 1
Output VSWR (All States)		1.8	2.2		2.0	2.3		2.2	2.5	: 1
Input 0.1 dB Compression Point		25			25			25		dBm
IP3 Input		45			43			43		dBm
Switching Speed 50% CTRL* to 90% or 10%	150									ns
Weight	1.06									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	70/50									mA
Input / Output Connectors	2.92mm - Female									
Interface and Control Connector	MICRO-D15(Female)									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

### Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V / 2.8~5V
RF Input Power	+27dBm

### Ordering Information

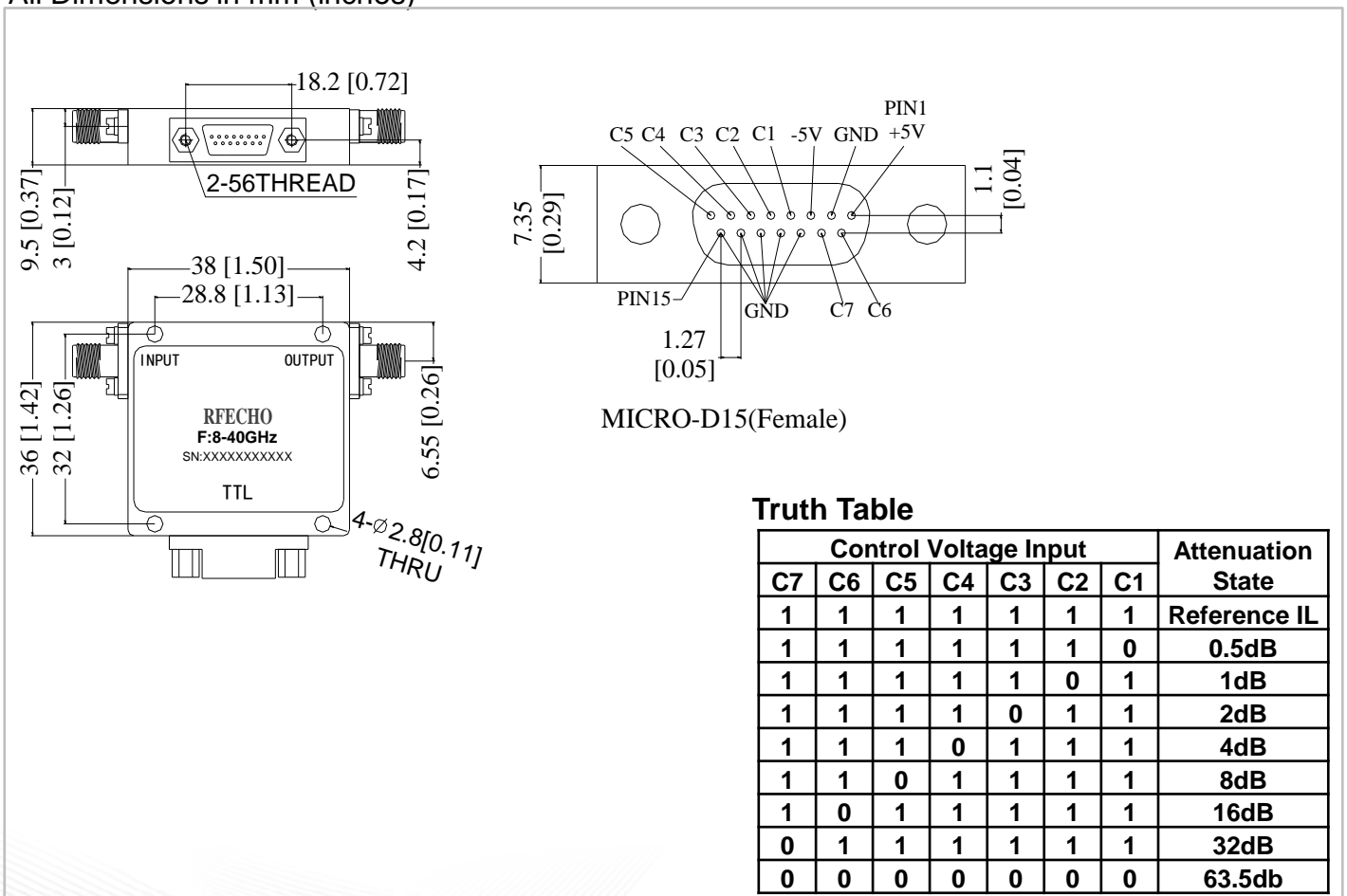
Part No.	Description
DBDA0708004000A	8-40GHz Digital Control Attenuator

### 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

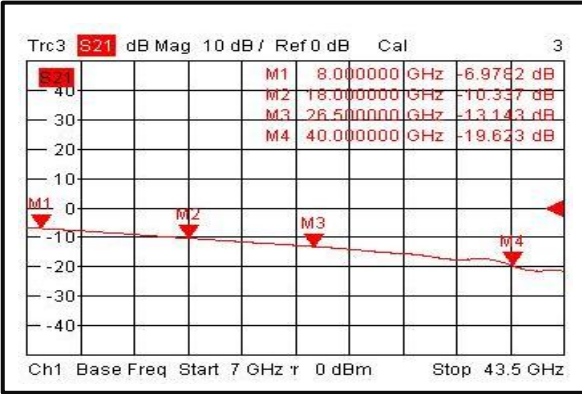
### Outline Drawing:

All Dimensions in mm (inches)

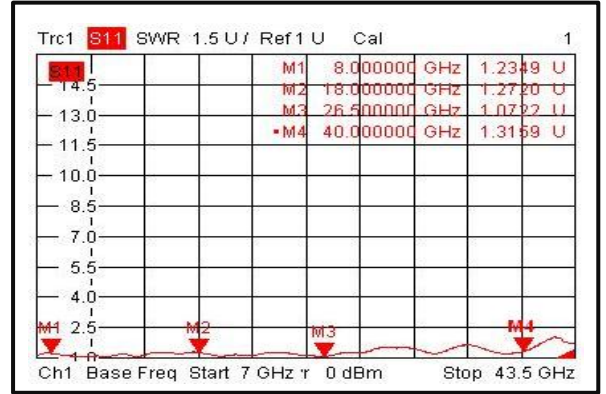




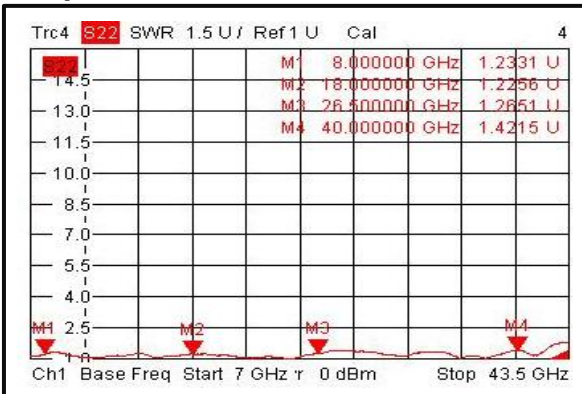
### Insertion Loss @+25°C



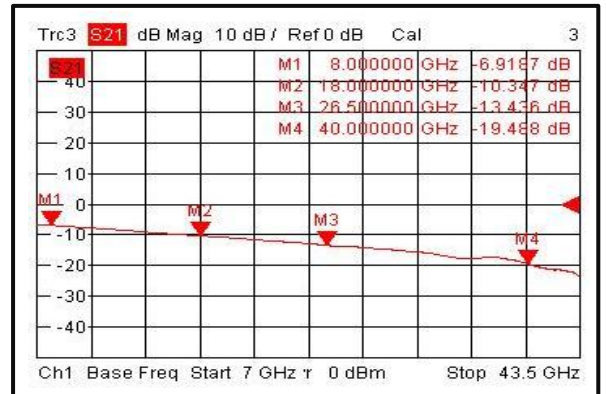
### Input VSWR @+25°C



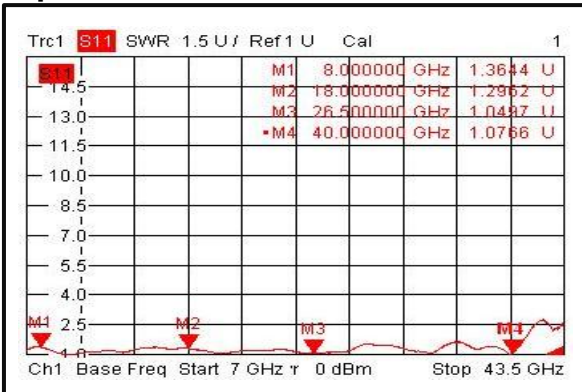
### Output VSWR @+25°C



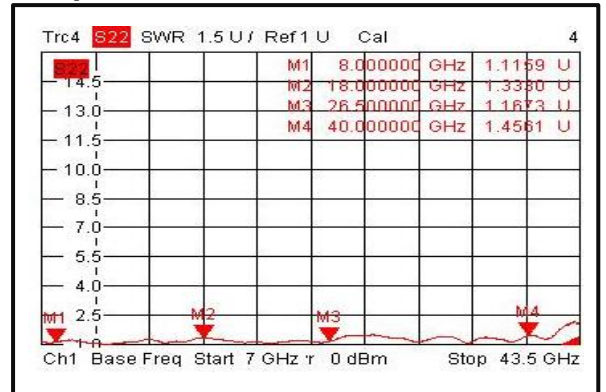
### Insertion Loss @-40°C



### Input VSWR @-40°C

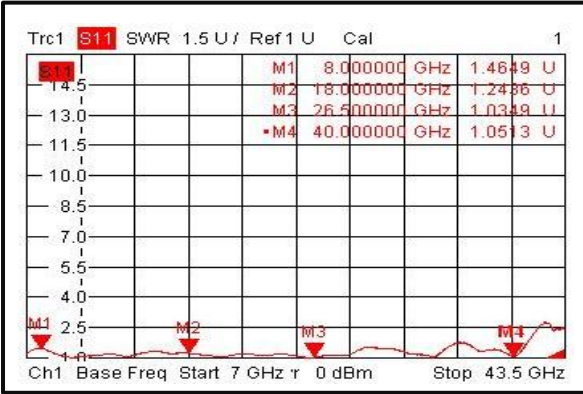


### Output VSWR @-40°C

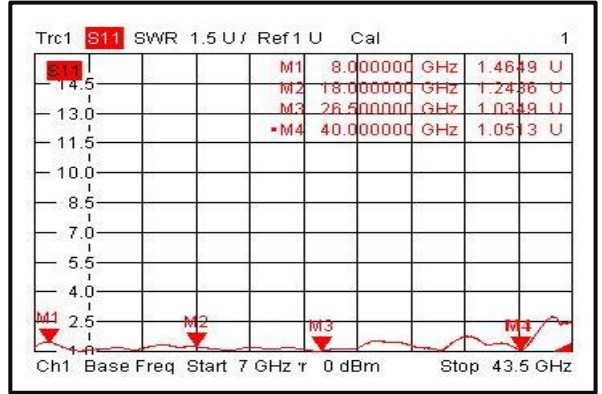




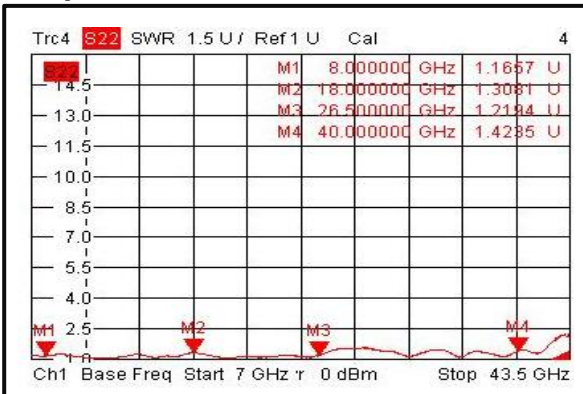
### Insertion Loss @+85°C



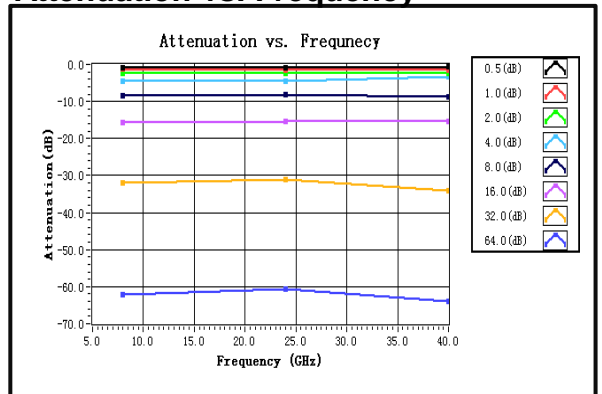
### Input VSWR @+85°C



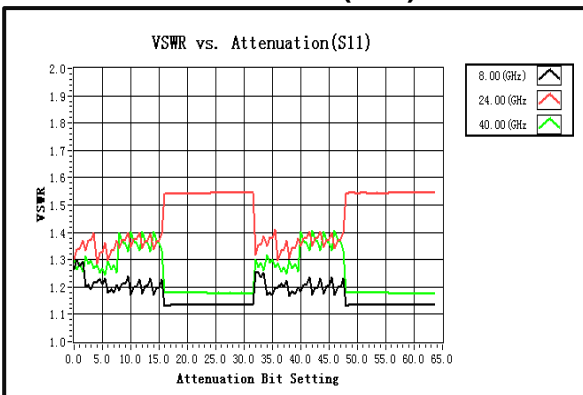
### Output VSWR @+85°C



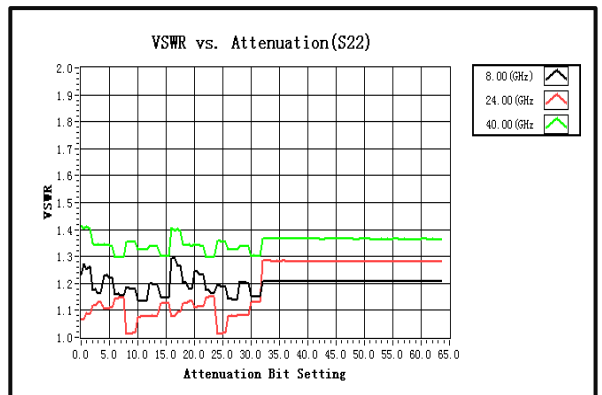
### Attenuation vs. Frequency



### VSWR vs. Attenuation(S11)

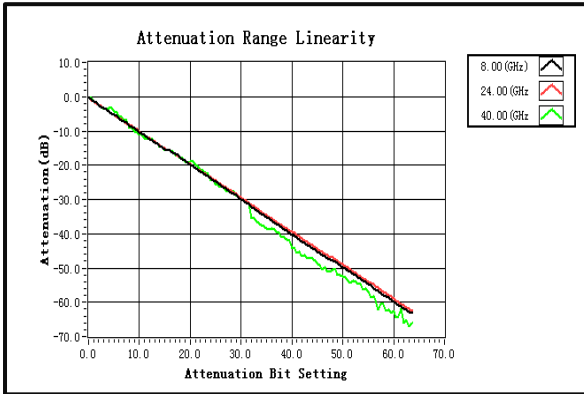


### VSWR vs. Attenuation(S22)

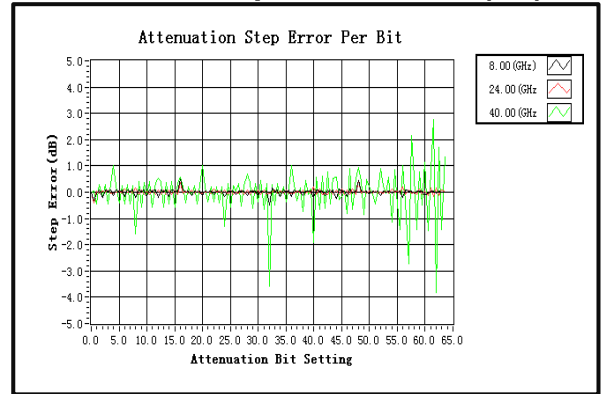




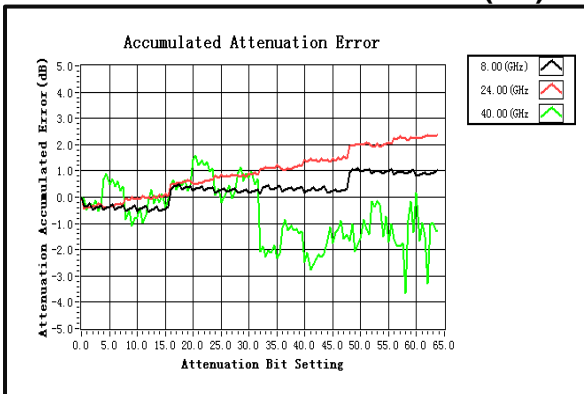
### Attenuation Range Linearity



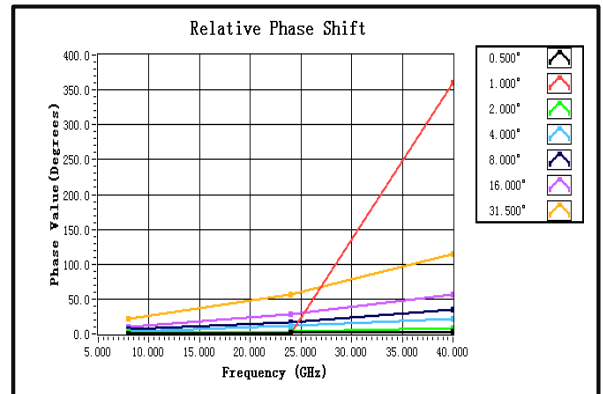
### Attenuation Step Error Per Bit (dB)



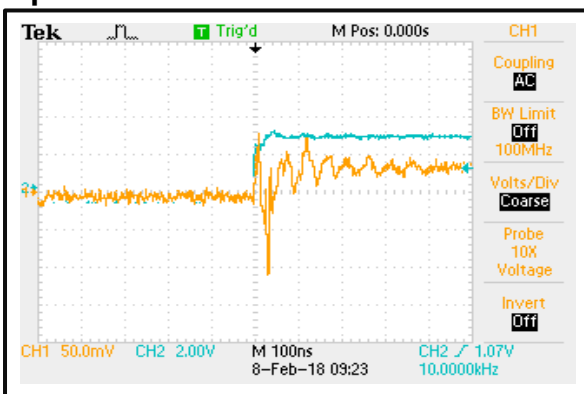
### Accumulated Attenuation Error (dB)



### Relative Phase Shift



### Speed



### Speed

