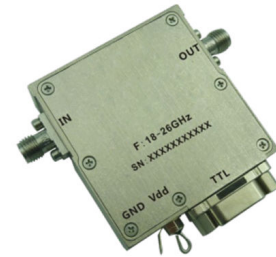




# Digital 360° Phase Shifter 18-26GHz

## Features

- Wide Band Operation 18-26GHz
- 6-Bit Phase Shift
- Temperature Range -40°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.



Parameters	Min	Typ.	Max	Units
Frequency Range	18		26	GHz
Phase Range		360		°
Control Bits			6	Bit
Control Step size		5.625		°
Insertion Loss		14	16	dB
Insertion Loss Temperature Coefficient		0.008		dB/ °C
Phase Flatness		±5	±25	°
Input VSWR		2.5	3.5	: 1
Output VSWR		2.5	3.5	: 1
Input 1 dB Compression Point(P1dB)			23	dBm
Weight		1.76		Ounces
Impedance		50		Ω
Bias Current (+12V)		20		mA
Input / Output Connectors		2.92-Female		
Interface and Control Connector		MICRO-D15 (Female)		
Finish		Nickel plated		
Material		Aluminum		
Sealing		Hermetically Sealed (Optional)		



### Absolute Maximum Ratings

Biasing	+12V±10%
TTL Control Voltage	0~0.8V/2.8~5V

### 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
DBDP0618002600A	18-26GHz Digital Phase Shifter

### Outline Drawing:

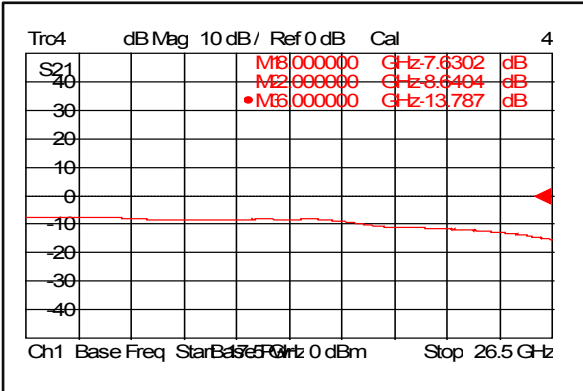
All Dimensions in mm (inches)

The drawing shows the physical dimensions and pin configurations of the RFecho 18-26GHz Digital Phase Shifter. Key dimensions include a total length of 43 mm [1.693] and a width of 12 mm [0.472]. The front view shows an IN port, an OUT port, and control pins for GND, Vdd, and TTL. The side view shows a height of 2.5 mm [0.098] and a depth of 40 mm [1.575]. The top view shows a MICRO-D15(Female) connector with pins 1-15, including C1-C6, NC, and GND. A 4-M3 deep 5 [0.2] screw is also indicated.

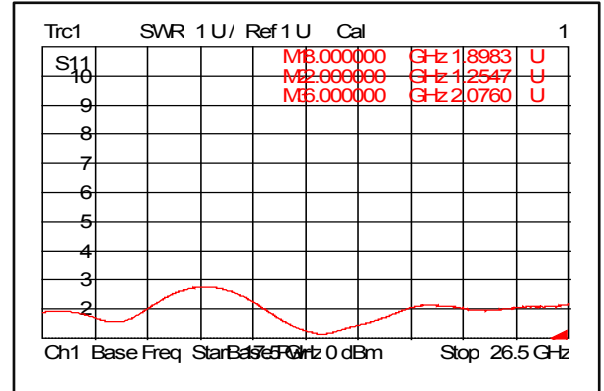
Control Voltage Input						Phase Shift (Degree)
C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	Reference
1	1	1	1	1	0	5.625
1	1	1	1	0	1	11.25
1	1	1	0	1	1	22.5
1	1	0	1	1	1	45
1	0	1	1	1	1	90
0	1	1	1	1	1	180
0	0	0	0	0	0	354.375



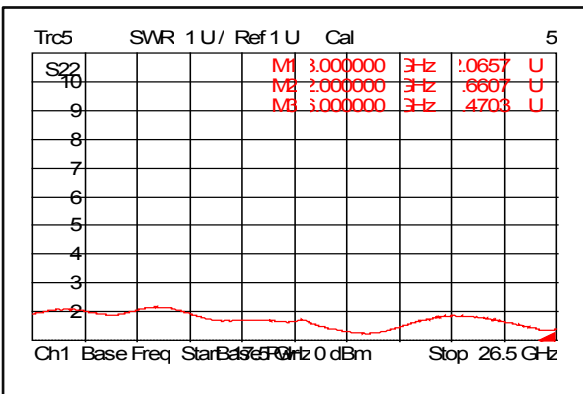
### Insertion Loss @+25°C



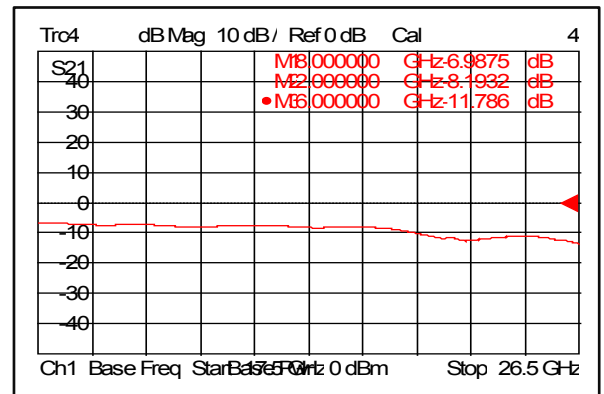
### Input VSWR @+25°C



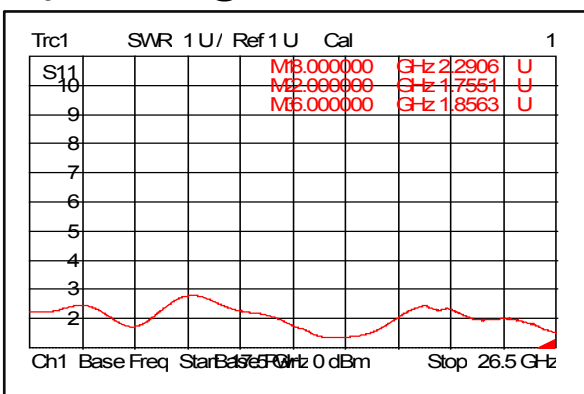
### Output VSWR @+25°C



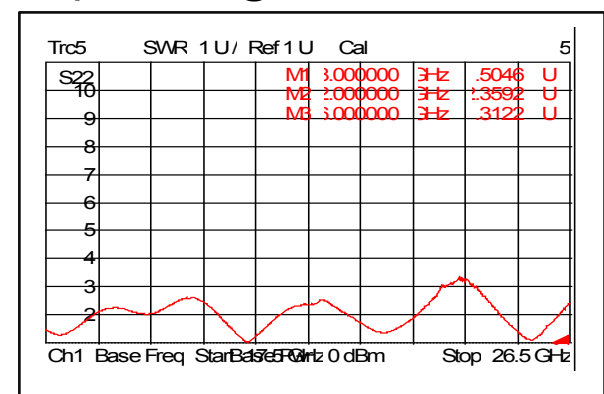
### Insertion Loss @-40°C



### Input VSWR @-40°C

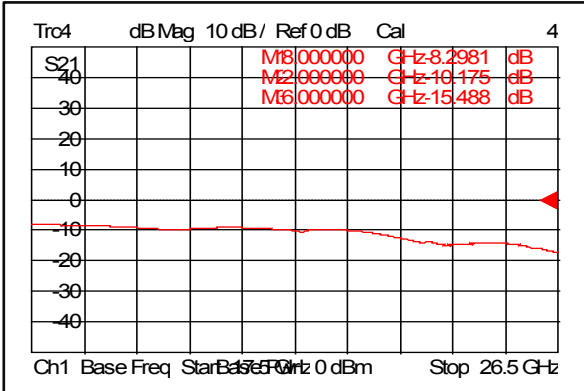


### Output VSWR @-40°C

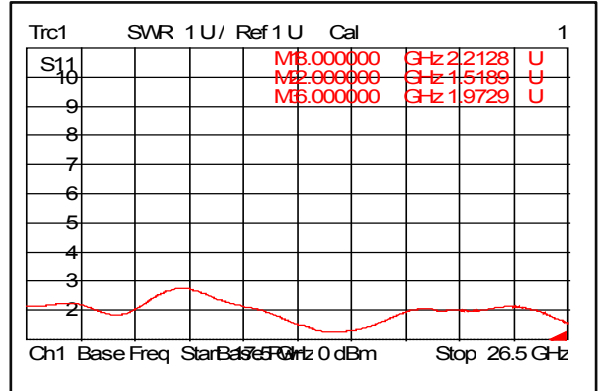




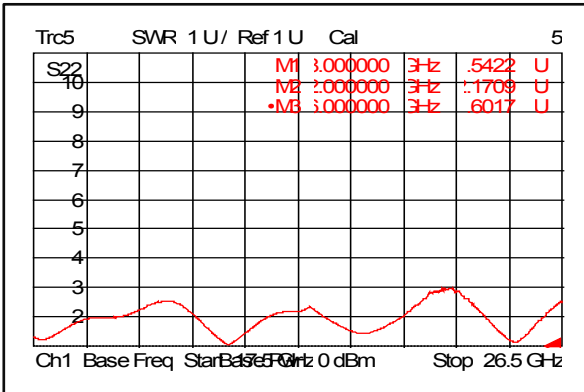
### Insertion Loss @+85°C



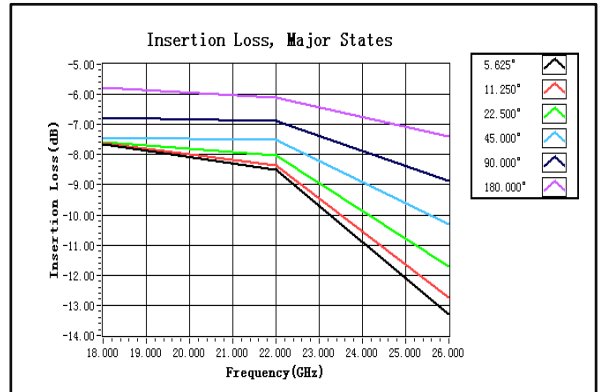
### Input VSWR @+85°C



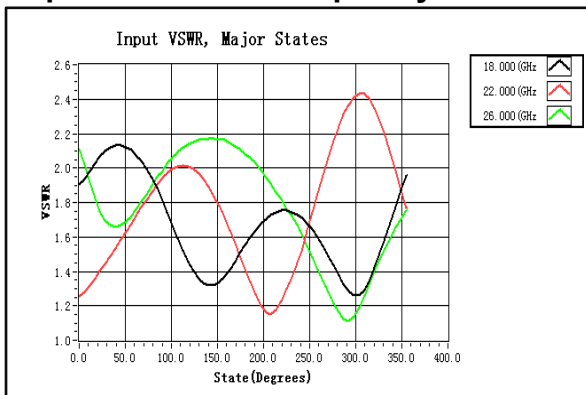
### Output VSWR @+85°C



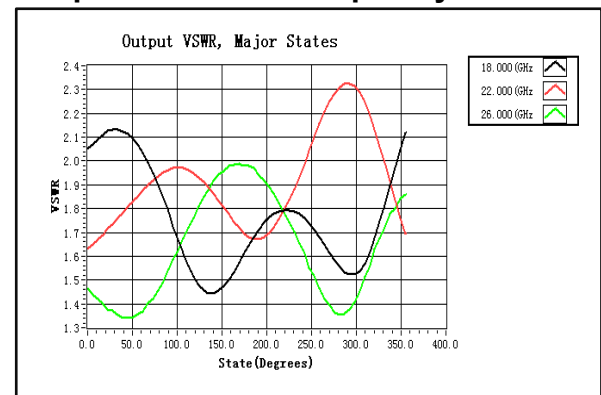
### Insertion Loss vs. Frequency



### Input VSWR vs. Frequency

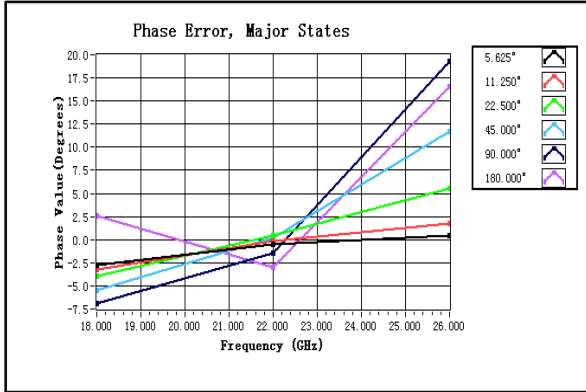


### Output VSWR vs. Frequency





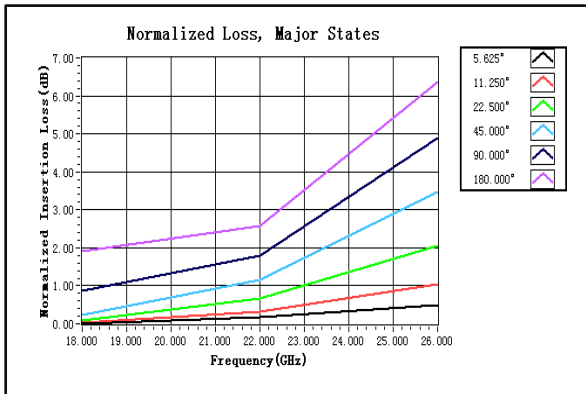
### Phase Error vs. Frequency



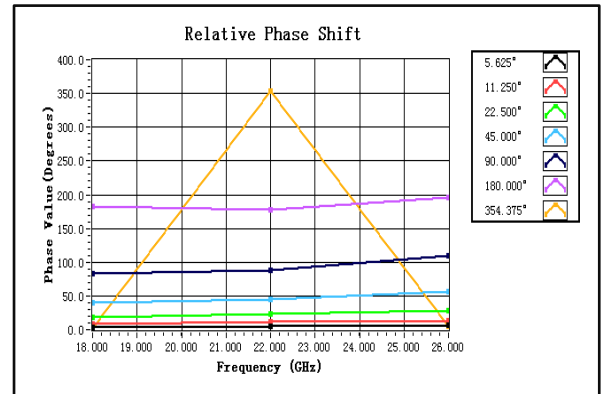
### Phase Error vs. State



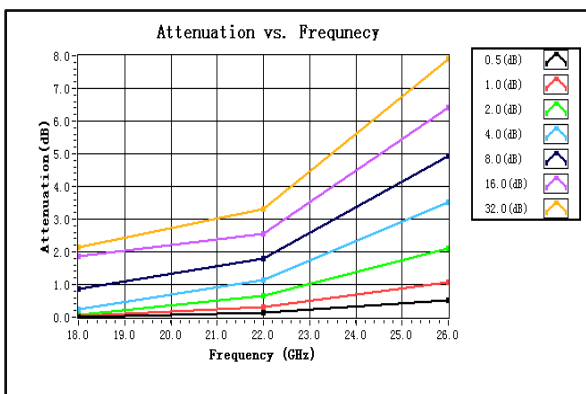
### Normalized Loss . All States



### Relative Phase Shift vs. Frequency



### Attenuation vs. Frequency



### Speed

