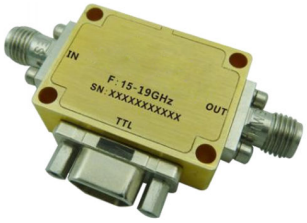
Digital Non-Dispersive 360 Degree Phase Shifter 15 - 19GHz



Features

- Wide Band Operation 15-19GHz
- 6-Bit Phase Shift
- Temperature Range -40ºC~+85ºC
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.

Parameters	Min	Typ.	Max	Units
Frequency Range		15-19		GHz
Phase Range		360		deg
Control Bits		6		Bit
Control Step Size		5.625		deg
Insertion Loss		8.2	9	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Phase Flatness		±5	±15	deg
Input VSWR		1.8	2.5	: 1
Output VSWR		1.8	2.5	: 1
Input Power(CW)			23	dBm
Bias Current (+5V)		40		mA
Weight		0.71		Ounces
Impedance		50		Ω
Input / Output Connectors		SMA-Female		
Interface and Control Connector		MICRO-D9(Female)		
Finish		Gold Plated		
Material		Aluminum		
Seal		Hermetically Sealed (Optional)		

Absolute Maximum Ratings

Biasing	+5V±10%
RF Input power	+23dBm

Environmental Specifications

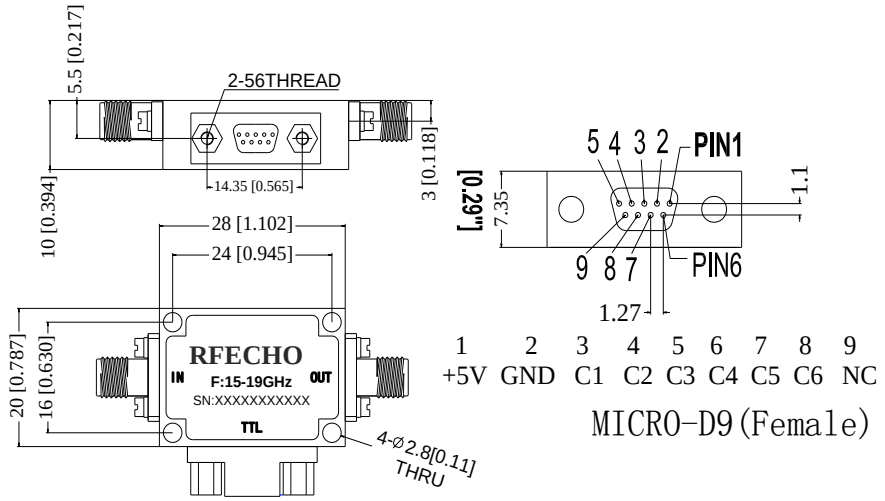
Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH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

Ordering Information

Part No.	Description
DBDP0615001900A	15-19GHz Digital Phase Shifter

Outline Drawing:

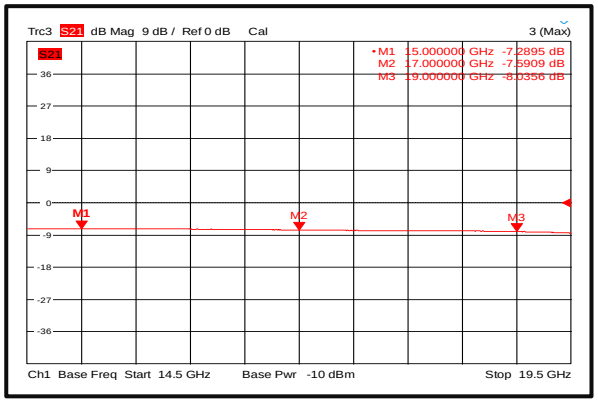
All Dimensions in mm (inches)



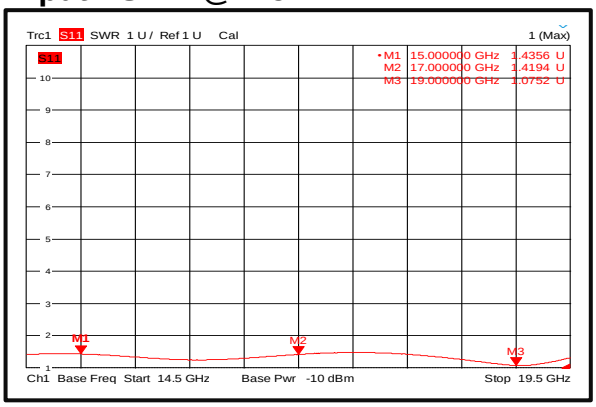
Truth Table

TTL Control Voltage THRESHOLD						Low(0)=0~0.8V High(1)=2.8~5V
Control Voltage Input						Phase Shift (Degrees)
C6	C5	C4	C3	C2	C1	
0	0	0	0	0	0	Reference
0	0	0	0	0	1	5.625
0	0	0	0	1	0	11.25
0	0	0	1	0	0	22.5
0	0	1	0	0	0	45
0	1	0	0	0	0	90
1	0	0	0	0	0	180
1	1	1	1	1	1	354.375

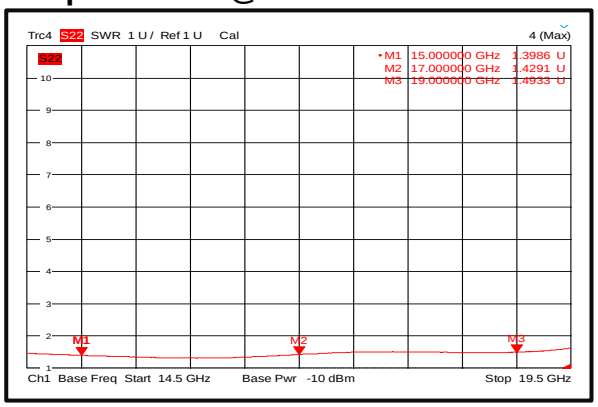
Insertion Loss@+25℃



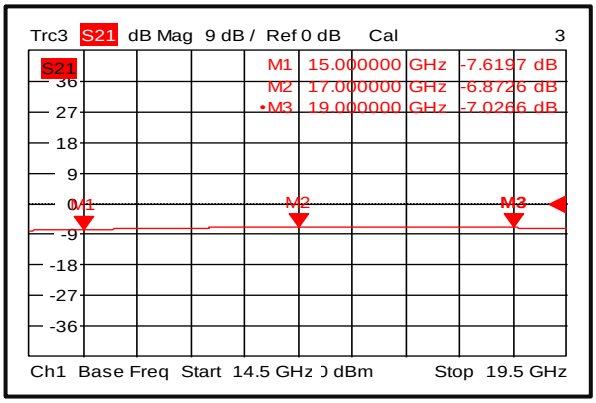
Input VSWR @+25℃



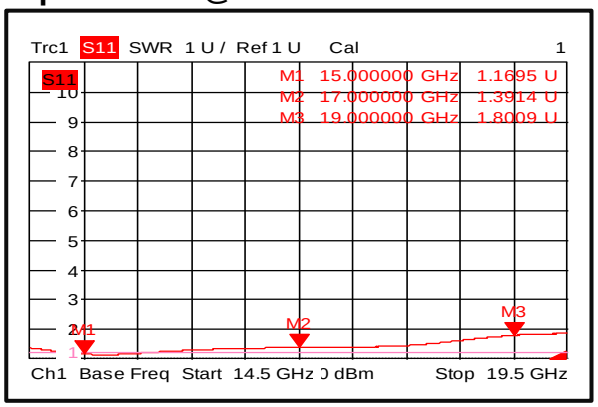
Output VSWR @+25℃



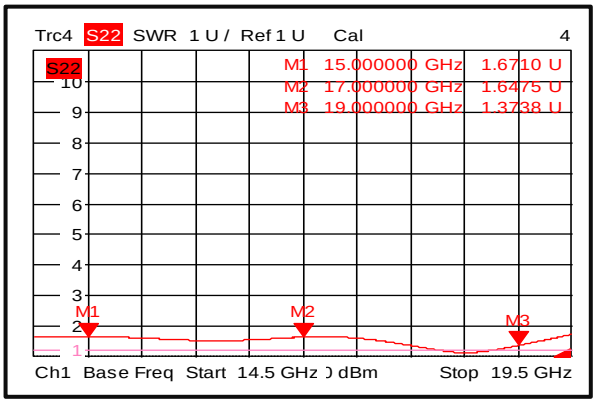
Insertion Loss@-45℃



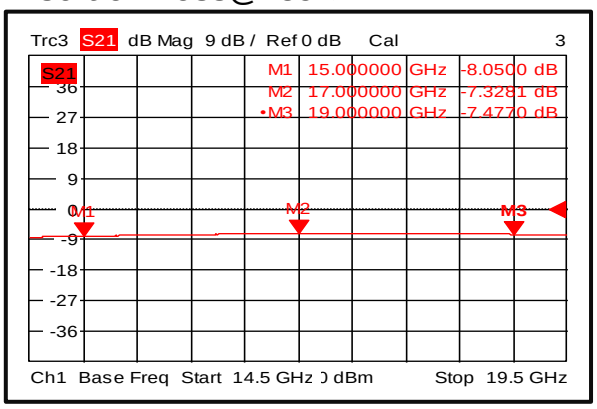
Input VSWR @-45℃



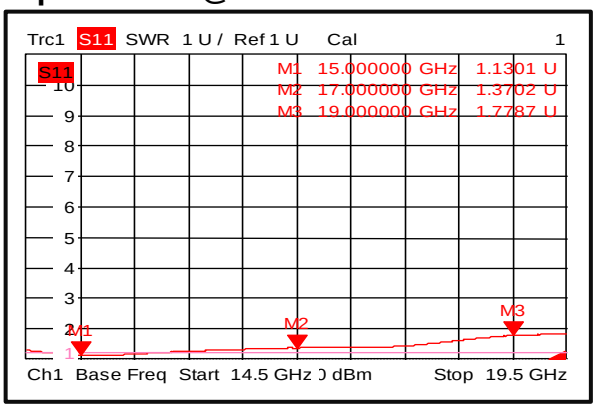
Output VSWR @-45℃



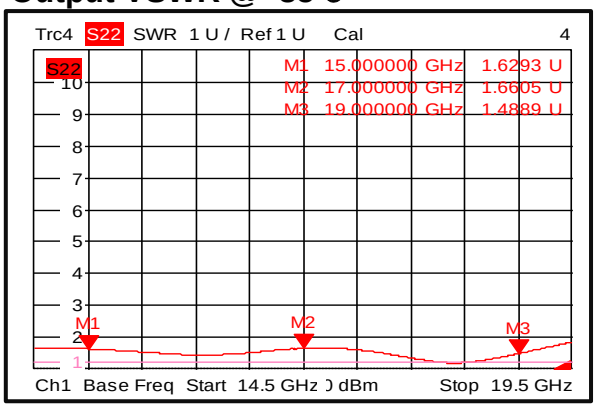
Insertion Loss@+85℃



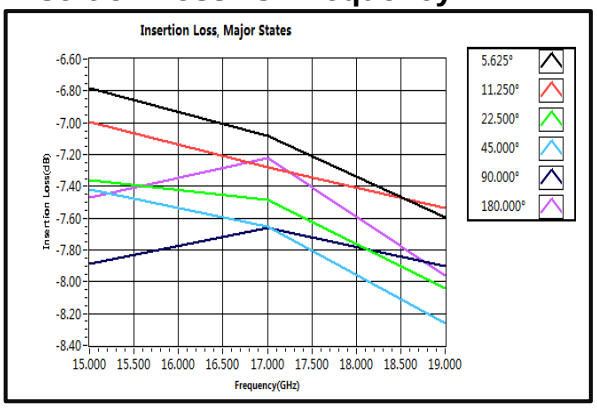
Input VSWR @+85℃



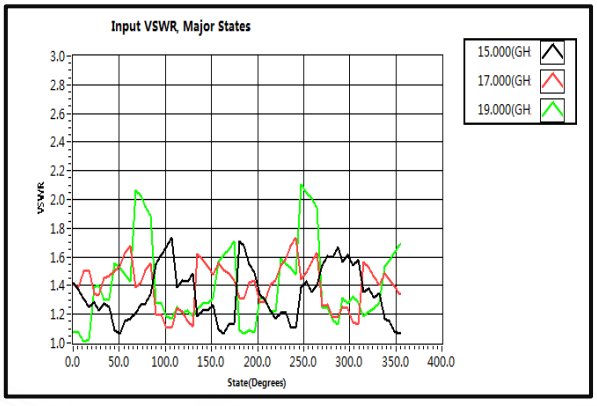
Output VSWR @+85℃



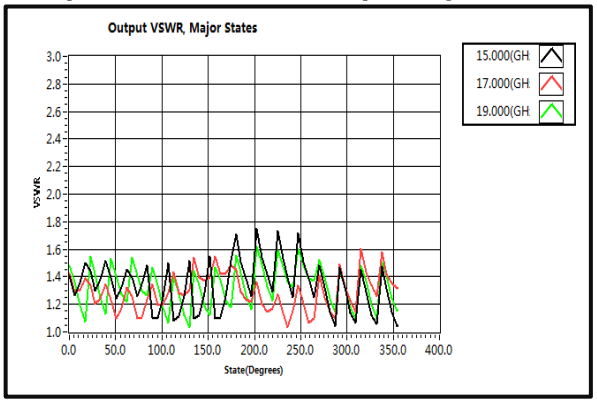
Insertion Loss vs. Frequency



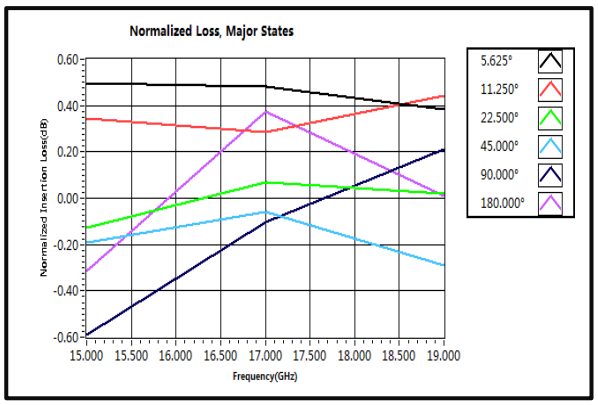
Input VSWR vs. Frequency



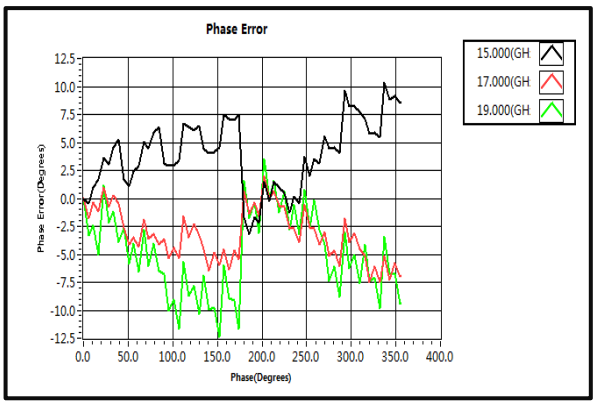
Output VSWR vs. Frequency



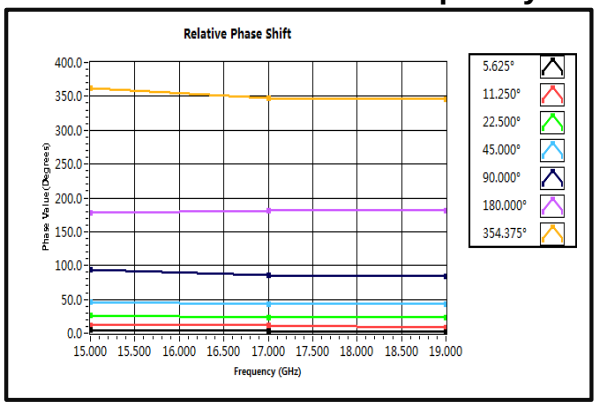
Normalized Loss



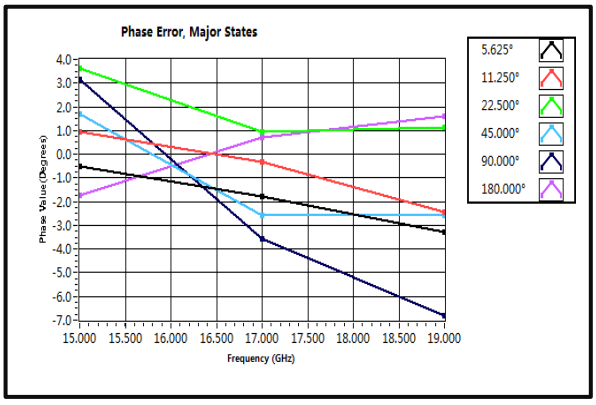
Phase Error vs. State



Relative Phase Shift vs. Frequency



Phase Error vs. Frequency



Attenuation vs. Frequency