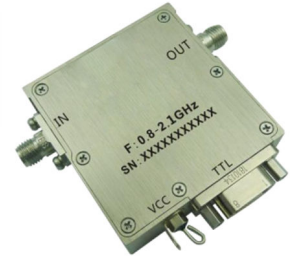




Digital Control 360°Phase Shifter 0.8 – 2.1GHz

Features

- Wide Band Operation 0.8-2.1GHz
- 360° Phase Shift
- Fast Switching Speed



Parameters	Min	Typ.	Max	Units
Frequency Range	0.8		2.1	GHz
Phase Range		360		deg
Control Bits			6	bit
Control Step Size		5.6		deg
Insertion Loss		4.0	6.0	dB
Insertion Loss Temperature Coefficient		0.003		dB / °C
Phase Flatness		±20	±35	deg
Input VSWR		1.5	2.5	: 1
Output VSWR		1.5	2.5	: 1
Input 1dB Compression Point (P1dB)		27		dBm
Input Ip3		50		dBm
Switching Speed		500		us
Weight		2.12		ounces
Impedance		50		Ω
Bias Current(+12V)		200		mA
Input / Output Connectors	SMA - Female			
Interface and Control Connector	MICRO-D9 (Female)			
Finish	Nickel Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			



Absolute Maximum Ratings

Bias Voltage	+15V
RF Input Power	+27dBm

Ordering Information

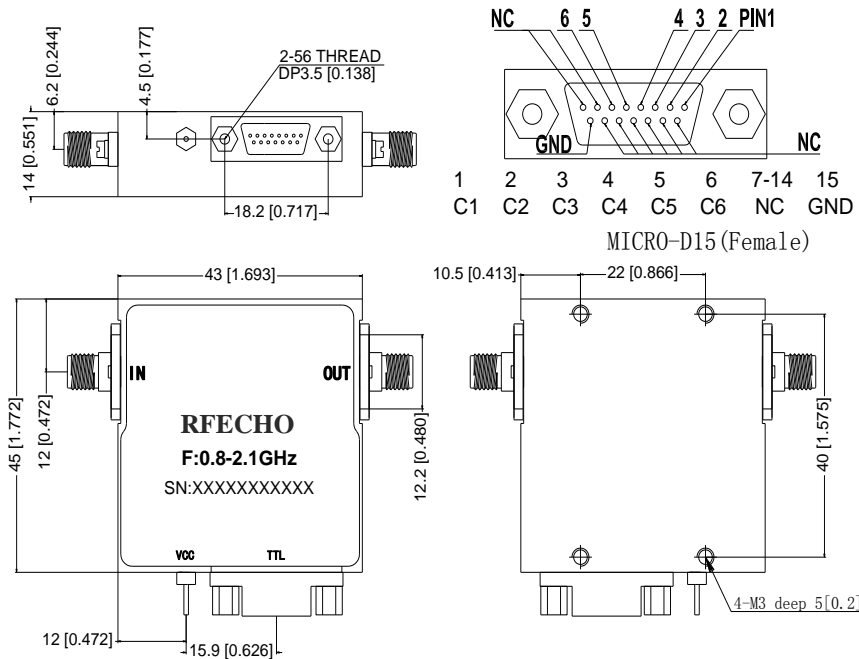
Part No.	Description
DBDP0600800210A	0.8-2.1GHz Digital Phase Shifter

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)

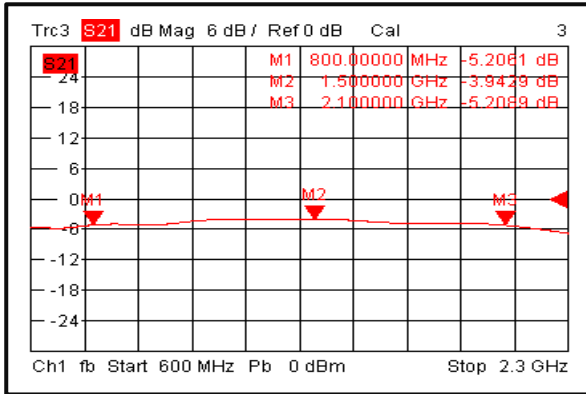


Truth Table

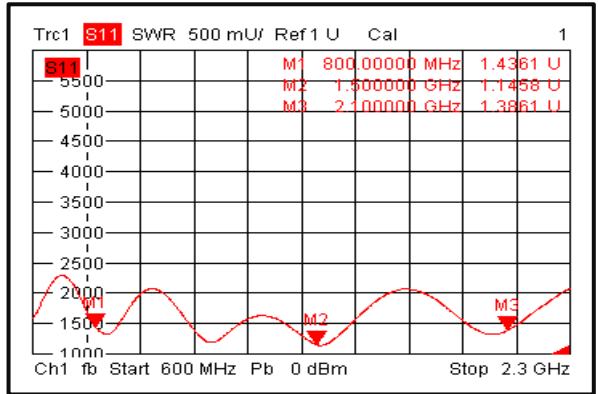
TTL Control Voltage THRESHOLD						Low(0)=0~0.8V
Control Voltage Input						High(1)=2.8~5V
C6	C5	C4	C3	C2	C1	Phase Shift (Degrees)
1	1	1	1	1	1	Reference
1	1	1	1	1	0	5.625
1	1	1	1	0	1	11.25
1	1	1	0	1	1	22.5
1	1	0	1	1	1	45
1	0	1	1	1	1	90
0	1	1	1	1	1	180
0	0	0	0	0	0	354.3



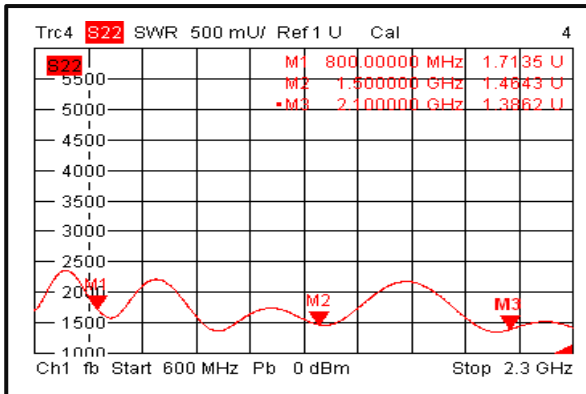
Insertion Loss @+25°C



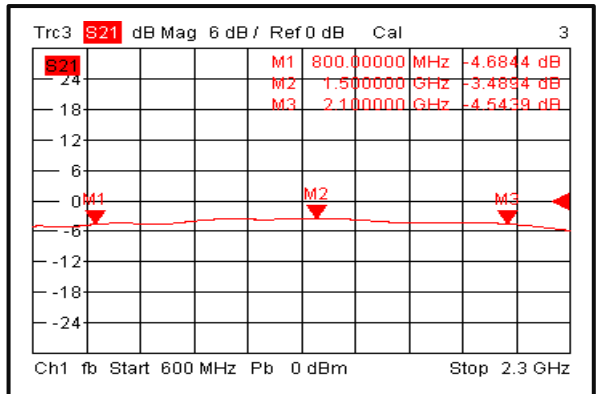
Input VSWR @+25°C



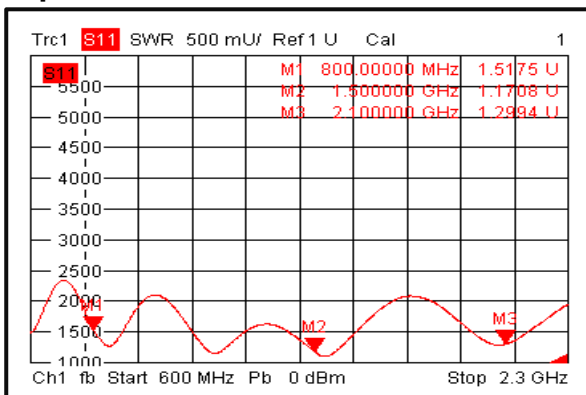
Output VSWR @+25°C



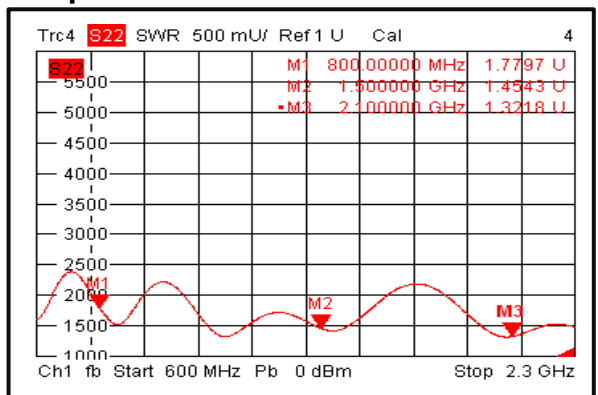
Insertion Loss @-40°C



Input VSWR @-40°C

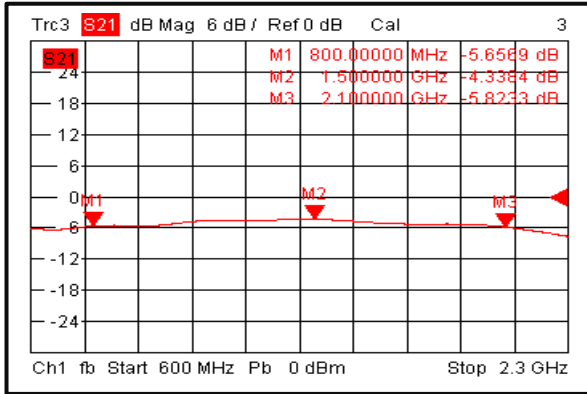


Output VSWR @-40°C

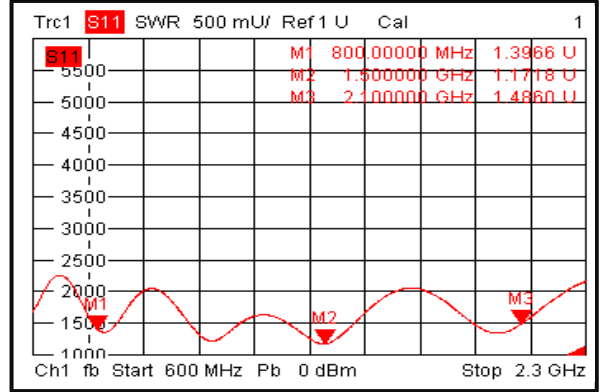




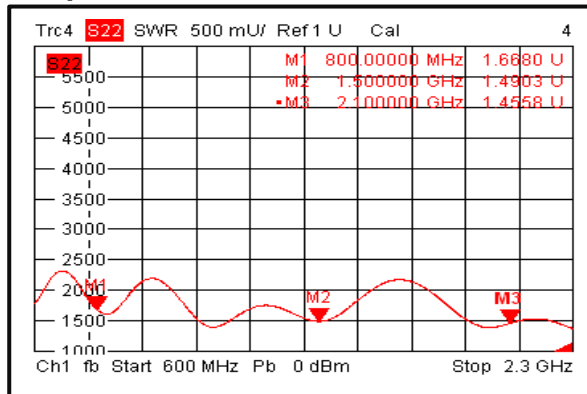
Insertion Loss @+85°C



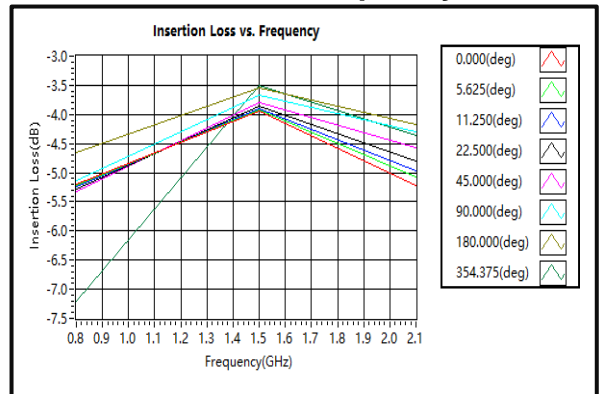
Input VSWR @+85°C



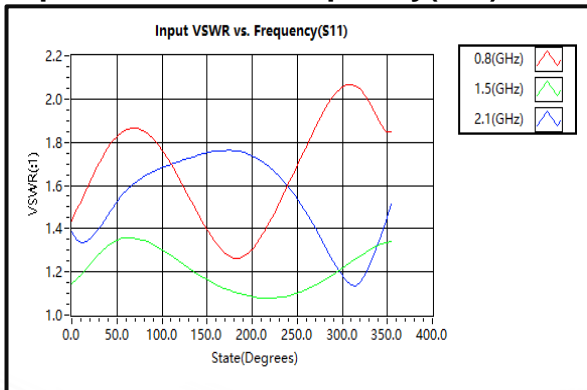
Output VSWR @+85°C



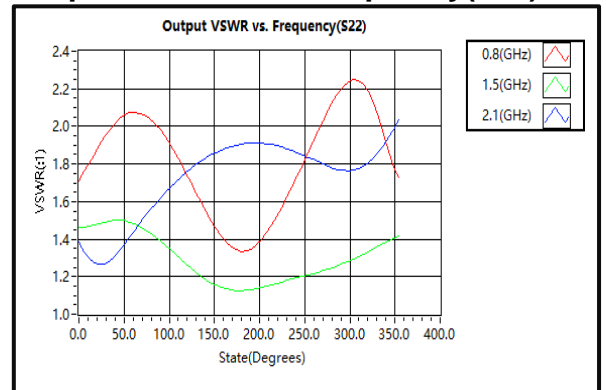
Insertion Loss vs. Frequency



Input VSWR vs. Frequency (s11)

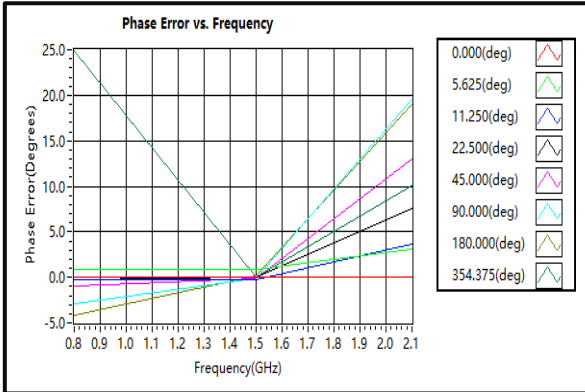


Output VSWR vs. Frequency (s22)

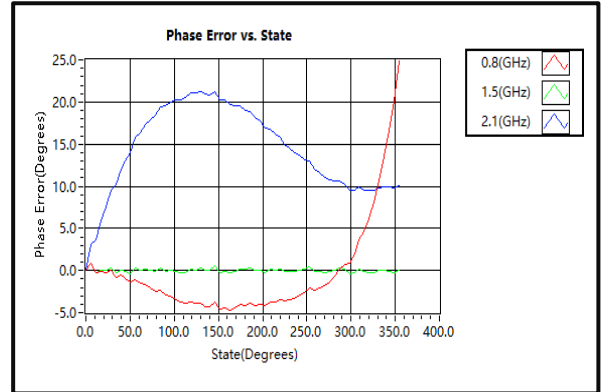




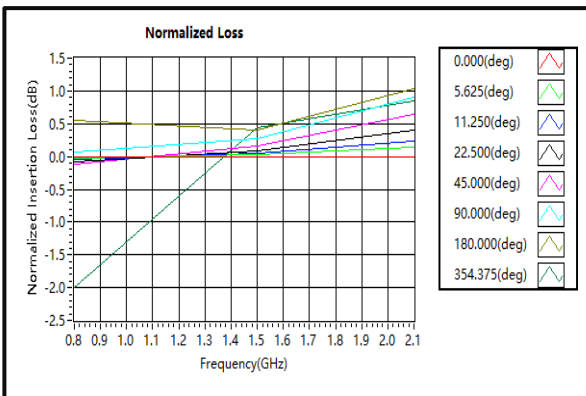
Phase Error vs. Frequency



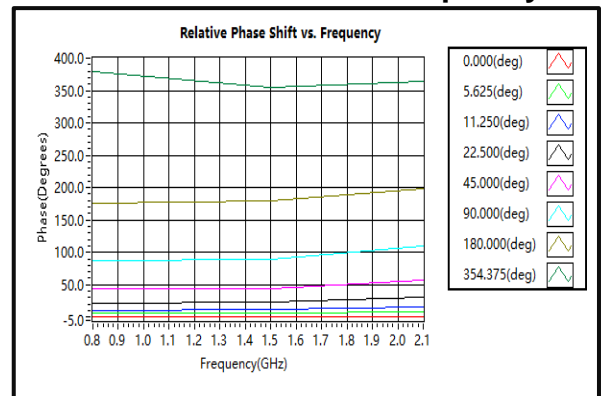
Phase Error vs. State



Normalized Loss. All States



Relative Phase Shift vs. Frequency



Attenuation vs. Frequency

