



Digital Non-Dispersive 360° Phase Shifter 7.5-10GHz

Features

- Wide Band Operation 7.5-10GHz
- 360° Phase Shift
- Fast Switching Speed
- Temperature Range -40°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000 ft available upon request.



Parameters	Min	Typ.	Max	Units
Frequency Range	7.5		10	GHz
Phase Range		360		°
Insertion Loss		9	10	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Phase Flatness		±4		°
Input Return loss	12	15		dB
Output Return loss	12	15		dB
Input Power		20		dBm
Response Time			1	us
Weight	1.8			ounces
Impedance	50			Ω
Biasing (-5V)	50			mA
Input /Output Connectors	SMA-Female			
Control PIN	Micro-D9			
Finish	Gold Plated			
Material	Brass			
Seal	Hermetically Sealed (optional)			



Absolute Maximum Ratings

Biasing	-5V±10%
TTL Control Voltage	0~0.8V/2~5V

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
DBDP0607501000A	7.5-10GHz Digital Non-Dispersive Phase Shifter

Outline Drawing:

All Dimensions in mm (inches)

The drawing shows a top view and a side view of the phase shifter. The top view includes dimensions for the package width (20 mm), height (9.5 mm), and various mounting features. The side view shows the thickness (1.1 mm) and the location of the control pins. The pin configuration is detailed as follows:

1	2	3	4	5	6	7	8	9
NC	-5V	GND	C1	C2	C3	C4	C5	C6

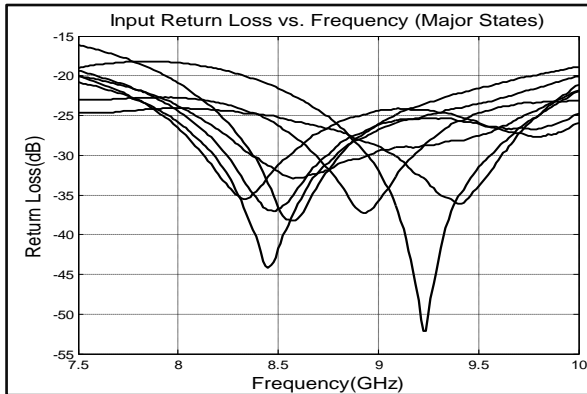
MICRO-D9

Truth Table

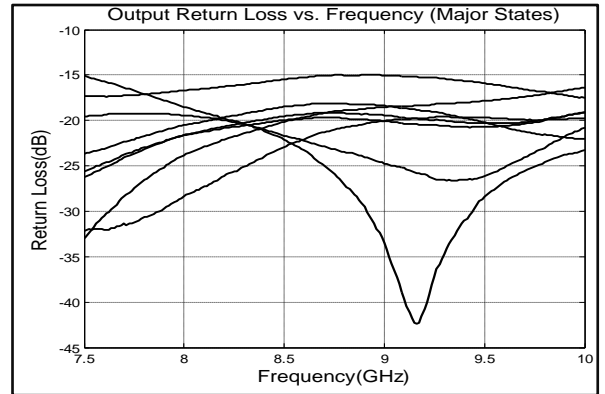
Control Voltage Input						Phase Shift (Degree)
C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	Reference
1	1	1	1	1	0	5.6
1	1	1	1	0	1	11.25
1	1	1	0	1	1	22.5
1	1	0	1	1	1	45
1	0	1	1	1	1	90
0	1	1	1	1	1	180
0	0	0	0	0	0	360



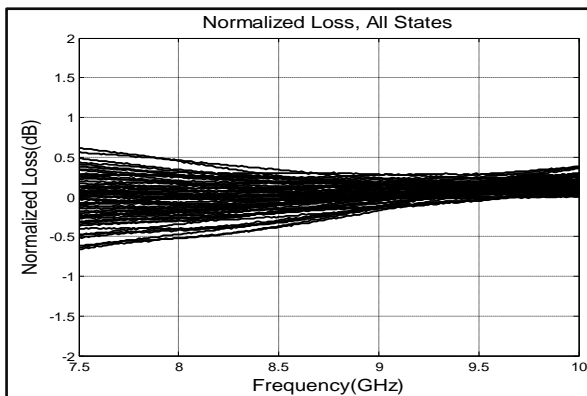
Input Return Loss vs. Frequency



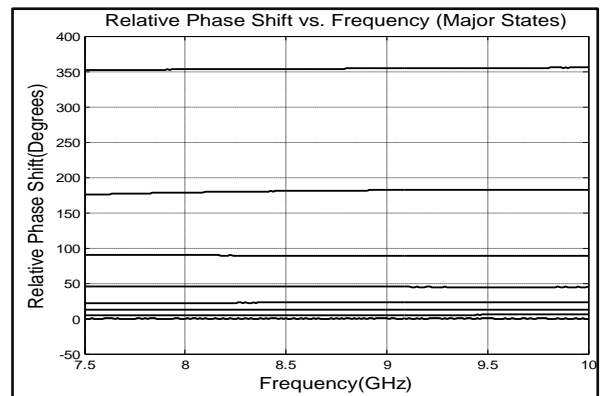
Output Return Loss vs. Frequency



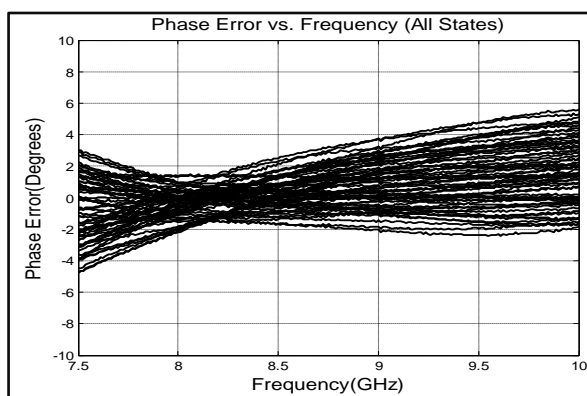
Normalized Loss . All States



Relative Phase Shift vs. Frequency



Phase Error vs. Frequency



Phase Error vs. State

