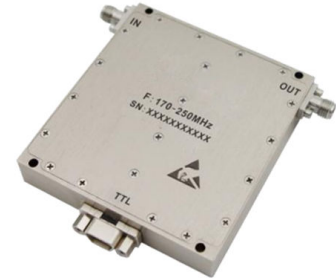




# Digital Non-Dispersive 360° Phase Shifter 170-250MHz

## Features

- Wide Band Operation 170-250MHz
- 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	170~250			MHz
Phase Range		360		°
Insertion Loss		3.5	4	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Phase Flatness		±12	±15	°
Input VSWR		1.7	2	ratio
Output VSWR		1.7	2	ratio
RF Input power (CW)			1	W
Power Dissipation (CW)		0.6		W
Input Power for 1 dB Compression		29		dBm
IM3		40		dBc
Weight	3.5			ounces
Impedance	50			Ω
Biasing (+5V/-5V)	240/180			mA
Input /Output Connectors	SMA-Female (Standard)			
Control PIN	MICRO-D9 Female			
Finish	Nickel Plated			
Material	Aluminum			
Seal	Hermetically Sealed ( optional )			



### Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2~5V
RF Input power	+30dBm

### Ordering Information

Part No.	Description
DBDP0600170025A	170-250MHz 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

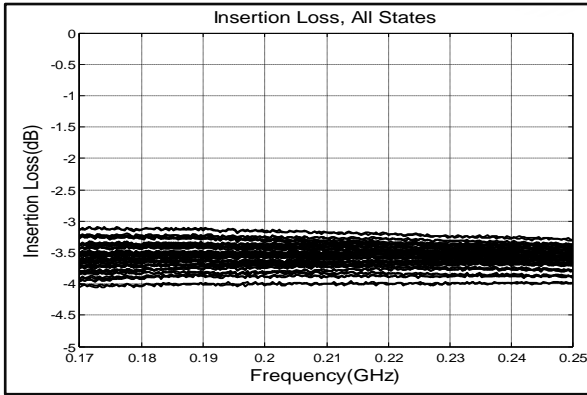
### Outline Drawing:

All Dimensions in mm (inches)

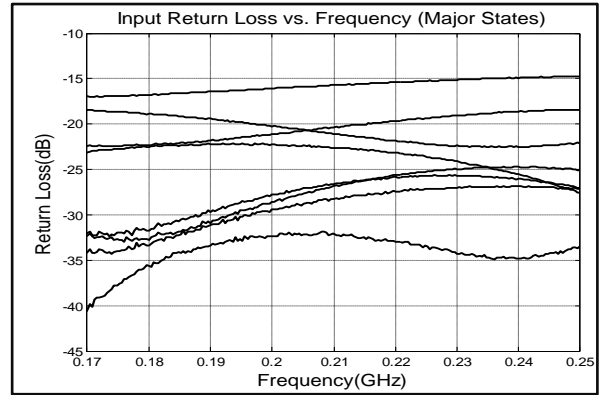
Control Voltage Input						Phase Shift (Degree)
C6	C5	C4	C3	C2	C1	
0	0	0	0	0	0	Reference
0	0	0	0	0	1	5.6
0	0	0	0	1	0	11.25
0	0	0	1	0	0	22.5
0	0	1	0	0	0	45
0	1	0	0	0	0	90
1	0	0	0	0	0	180
1	1	1	1	1	1	360



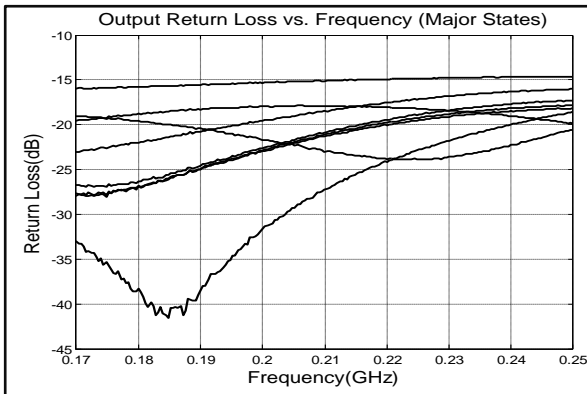
### Insertion Loss



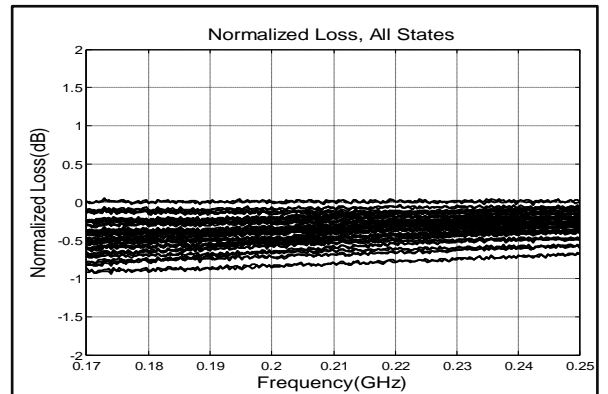
### Input Return Loss vs. Frequency



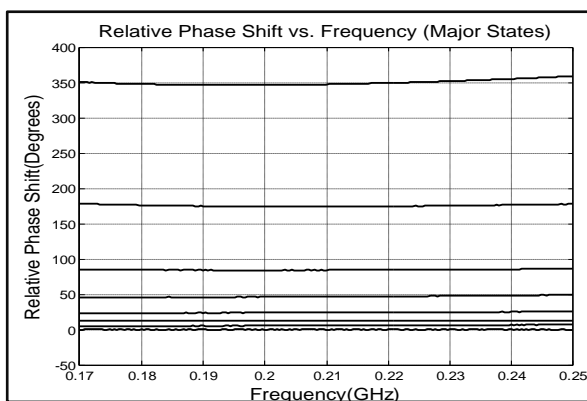
### Output Return Loss vs. Frequency



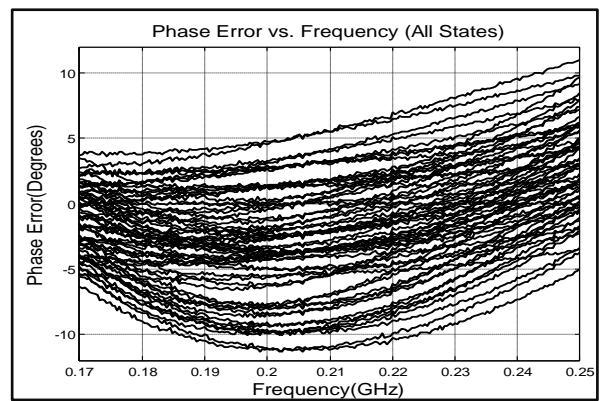
### Normalized Loss . All States



### Relative Phase Shift vs. Frequency



### Phase Error vs. Frequency





## Phase Error vs. State

