

MICRONETICS, INC. 26 Hampshire Drive Hudson, NH 03051	Title: Product Specification Sheet 6 Bit Digital Phase Shifter	Doc. No. PS-CPS4153 Rev: 2
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ECO No.	Rev.	Description of Change	Date	Eng	Mfg	QA
	2	UPDATED SPEC TERMINOLOGY; CORRECTED PHASE BIT ACCURACY TABLE	3/6/12	ME		

PARAMETER

SPEC LIMITS

1.0 Microwave Phase Shifter Specifications @ 25°C

1.1 Frequency Range	7 to 18 GHz
1.2 Number of bits	6
1.3 LSB Resolution	5.625 Degree
1.4 Input Power	
1.4.1 P1dB	24 dBm
1.4.2 Damage level	30 dBm
1.5 Insertion Loss for any state (Maximum)	
7 to 10 Ghz	10 dB
10 to 14 Ghz	12 dB
14 to 16 Ghz	13.5 dB
16 to 18 Ghz	15.5 dB
1.6 VSWR (Maximum)	2.5:1
1.7 Phase Bit Accuracy	
Bit 1 5.6 ±3°	
Bit 2 11.25 ±3°	
Bit 3 22.5 ±6°	
Bit 4 45 ±6°	
Bit 5 90 (7 to 15 Ghz) ±10° (15 to 18 Ghz) ±16°	
Bit 6 180 (7 to 10 Ghz) ±12° (10 to 18 Ghz) ±8°	
1.8 Phase Variation (unit to unit)	
5.6 to 22.5	4 Degree
22.5 to 180	6 Degree
1.9 Switching speed	30 nS

2.0 General Specifications

2.1 Connectors	
2.1.1 RF (J0, J1)	SMA(f)
2.1.2 Control (E1-E6)	Solder Pins
2.1.3 Bias	Solder Pins
2.2 Control	
2.2.1 Logic	TTL
2.2.2 State Table	
<u>Phase Bit control E1-E6</u>	<u>RF Path</u>
Logic 0	Ref.
Logic 1	Ref. + phase shift
2.3 DC Power Requirements	

- 2.3.1 Digital Supply
2.3.2 Digital supply current (Max)

+5 +/- 5% Vdc
10 mA

3.0 Environmental Requirements

3.1 Temperature

- 3.1.1 Operating
3.1.2 Storage
3.1.3 Cooling

-40 to +85°C
-55 to +150°C

Conduction cooling through surface of
switch body

3.2 Moisture sealed

(Hermetic seal optional)

4.0 Dimensions

Refer to outline drawing

