

## 6-Bit Digital Phase Shifter

Step 5.625° / 0-360° / 1-4GHz /

Model: TLDP-1G4G-360-6

The TLDP1G4G-360-6 is a 6-bit digital phase shifter, Step size is 5.6° providing phase shift from 0° to 360° in 5.6° steps. This design has been optimized to minimize variation in attenuation over the phase shift range. The TLDP1G4G-360-6 is ideally suited for use where high phase accuracy with minimum loss variation over the phase shift range are required. Typical applications include communications antennas and phased array radars.

### Features:

- Ultra Wide Band: 1-4GHz
- High Phase Shift Accuracy
- High Phase Shift Range
- Low Phase Error

### Applications:

- Communications antennas
- Phased array radars

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1		4	GHz
Insertion Loss		17		dB
Input VSWR		2		:1
Output VSWR		2		:1
Phase Shift Range		360		°
Phase accuracy		±4		°
Power Handling			25	dBm
Insertion loss variation over phase range			±1	dB
Switching speed		20		ns
DC Voltage		+5&-5		V DC
DC Supply Current		30		mA
Number of Bits		6		Bit

### Absolute Maximum Ratings :

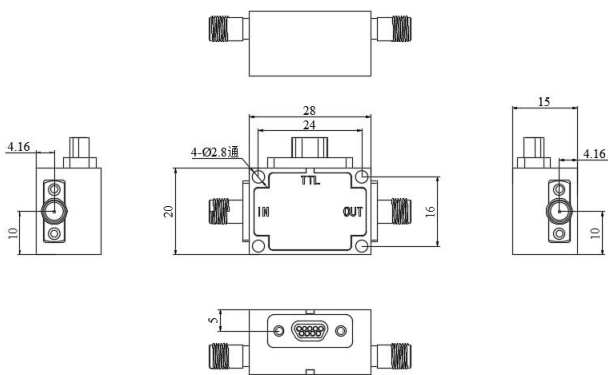
Description	Parameter	Units
Supply Bias Voltage	±5 (±5%)	V
RF Input Power	25	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

## Environmental And Physical Characteristics:

Description	Parameter	Units
Operating Temperature	-55 To +125	°C
Storage Temperature	-55 to +125	°C
Material	Al	
Finish	Gold Plated	
Input /Output Connector	SMS Female	
DC and control interface	J30J-9ZKP	

## Outline Drawing:

Unit:mm



Truth Table							Signal Path State
TTL Control Input							
Bit1	Bit2	Bit3	Bit4	Bit5	Bit6		
0	0	0	0	0	0	Reference	
1	0	0	0	0	0	5.625	
0	1	0	0	0	0	11.25	
0	0	1	0	0	0	22.5	
0	0	0	1	0	0	45	
0	0	0	0	1	0	90	
0	0	0	0	0	1	180	
1	1	1	1	1	1	354.375	

Note: +3.3V~+5V is "1"; 0V is "0"

PIN	1-6	7	8	9
Function	Bit1~Bit6	-5V	+5V	GND

## Ordering Information:

Base Number	Description	Revision
TLDP-1G4G-360-6	6-Bit Digital Phase Shifter,1-4GHz,SMA	Rev.1.1