Suzhou Talent Microwave,Inc
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6-Bit Digital Phase Shifter

Step:5.625°/0-360°/2.2-2.3GHz

Model: TLDPA2.2G2.3G-360-6

TLDPA2.2G2.3G-360-6 is a 6-bit digital phase shifter operating at 2.2–2.3 GHz, step size is 5.625°, providing phase shift from 0° to 360°, simultaneously features 10dB gain. This product is designed to deliver precise, rapid, and reliable phase control solutions for modern phased array radar, 5G communication system, and cutting-edge test equipment.

Features:

- Frequency range: 2-7GHz
- 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	2.2		2.3	GHz
Gain		10		dB
Gain Flatness		±0.25		dB
Gain Variation with Phase		±1.5		dB
Phase Shift Range	0		360	°
Lesat Significant Bit(LSB)		5.625		°
Phase accuracy		3		°
Ruturn Loss		-12		dB
Input Power	-70		-30	dBm
DC Voltage		+5/-5		V DC
Number of Bits		6		Bit
Impedance		50		Ohms

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Envrionmental And Physical Characteristics:

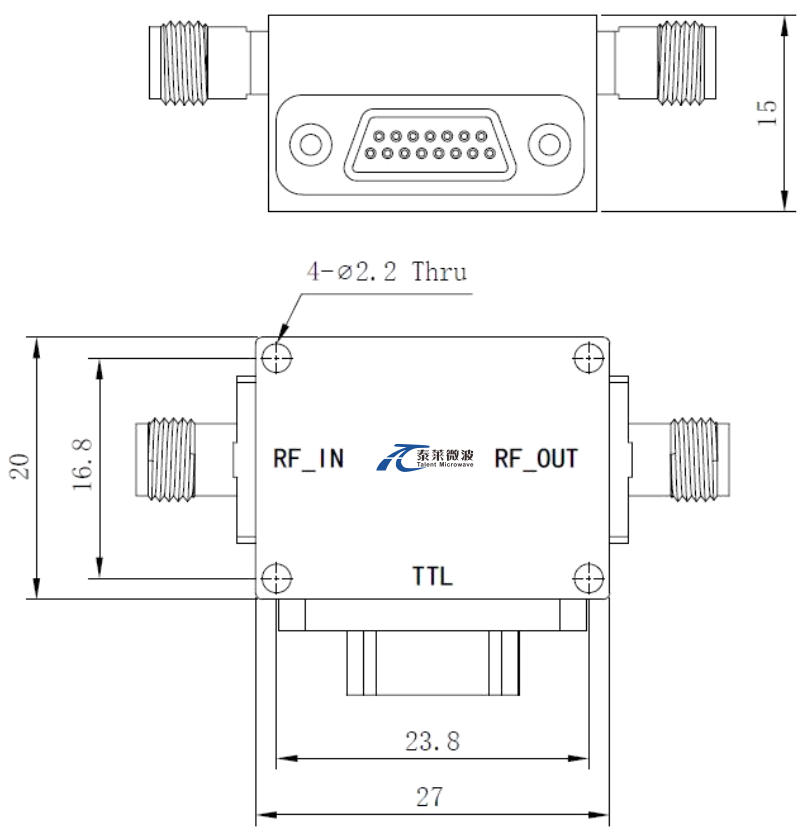
Description	Parameter	Units
Input /Output Connector	SMA Female/SMA Female	
DC and control interface	J30J-15ZKP	
Size	27*20*15	mm

Absolute Maximum Ratings :

Description	Parameter	Units
Supply Bias Voltage	+5.5	V
TTL Control Voltage	0~+0.2V/+3.3~+5V	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Truth Table						
TTL Control Input						Signal Path State
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：+5V is “1”； 0V is “0”

ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Note: The outline drawing provided is a preliminary version, and the specific dimensions may be subject to change.

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TTL Control Connector(J30J-15ZKP):

Pin	Function
1~2	+5V
3~4	-5V
5	Bit 1
6	Bit 2
7	Bit 3
8	Bit 4
9	Bit 5
10	Bit 6
11~13	GND
14~15	NC

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	℃
Non-operating Temperature	-55		+125	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLDPA2.2G2.3G-360-6	6-Bit Digital Phase Shifter, 2.2-2.3GHz,SMA	Rev.1.0