泰莱微波
Talent Microwave

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6-Bit Digital Phase Shifter

Step 5.625° /0-360° /18-40GHz / Model: TLDP18G40G-360-6-A

The TLDP18G40G-360-6-A 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 TLDP18G40G-360-6-A 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: 18-40GHz
- 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	18		40	GHz
Insertion Loss		13		dB
Input VSWR		2		:1
Output VSWR		2		:1
Phase Shift Range		360		°
Phase accuracy		±4		°
Power Handing			25	dBm
Insertion loss variation over phase range			±1	dB
Switching speed		20		ns
DC Voltage		+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	

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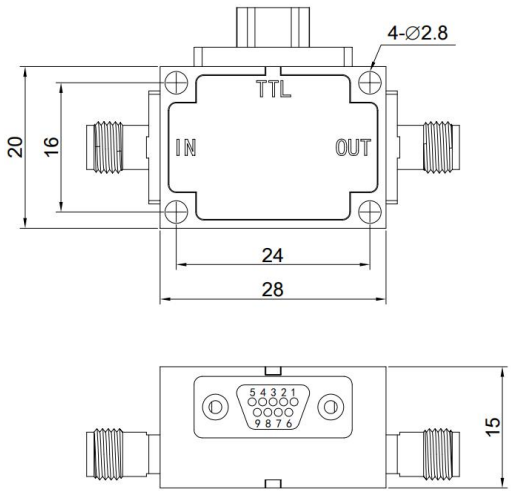
Envrionmental And Physical Characteristics:

Description	Parameter	Units
Operating Temerature	-55 To +125	℃
Storage Temerature	-55 to +125	℃
Material	Al	
Finish	Gold Plated	
Input /Output Connector	2.92 Female	
DC and control interface	J30J-9ZKP	

Outline Drawing:

Unit:mm



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：+3.3V~+5V is “1”； 0V is “0”

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

Ordering Information:

Base Number	Desciption	Revision
TLDP18G40G-360-6-A	6-Bit Digital Phase Shifter,18-40GHz,2.92mm	Rev.1.1

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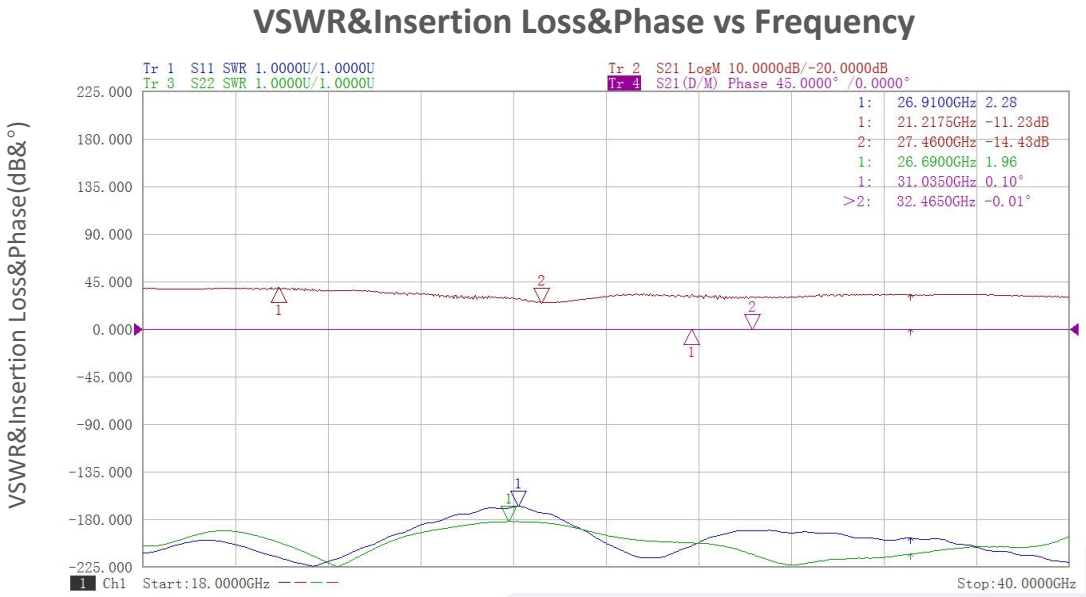
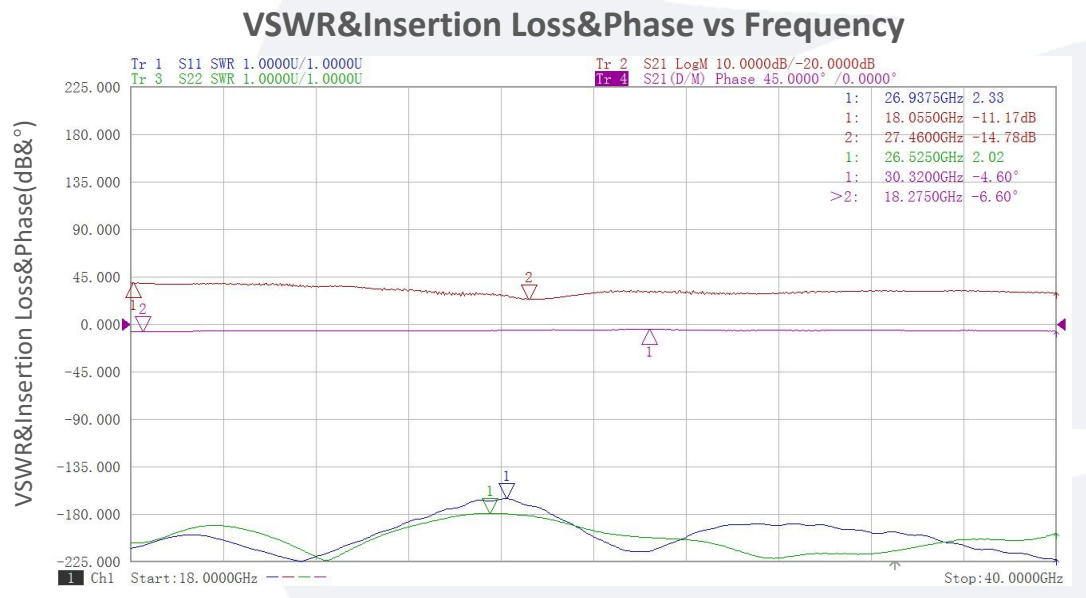
Typical Performance Data:

0° :



5.625° :



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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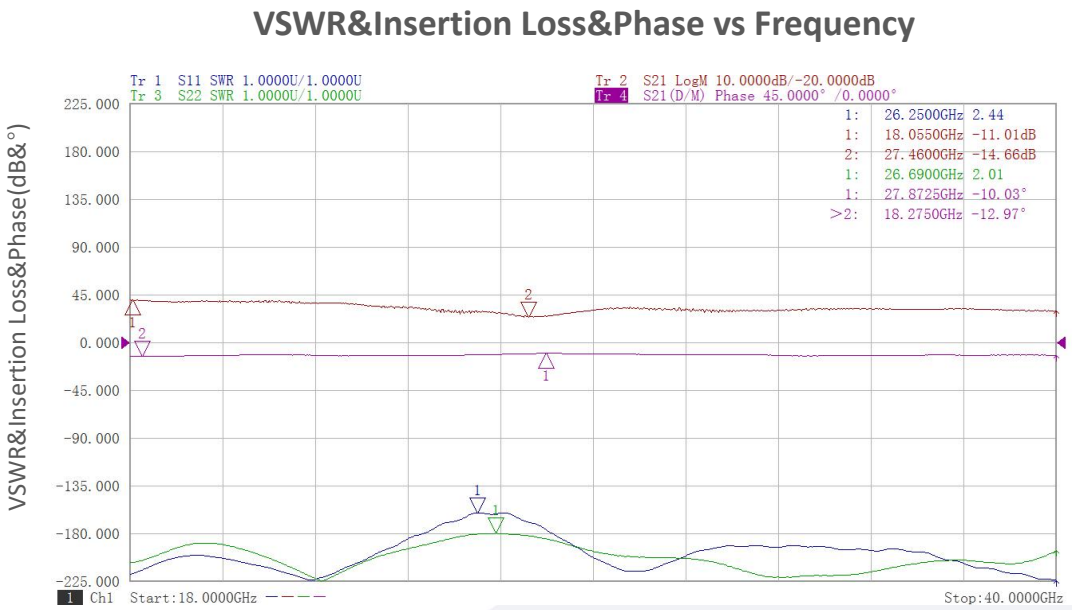
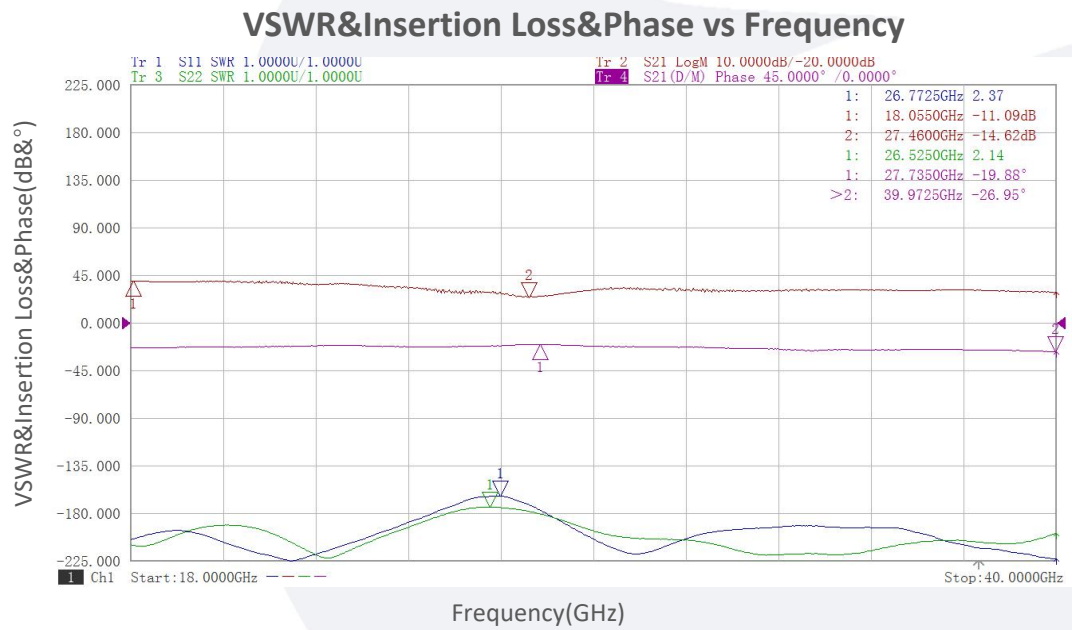
Typical Performance Data:

11.25° :



22.5° :



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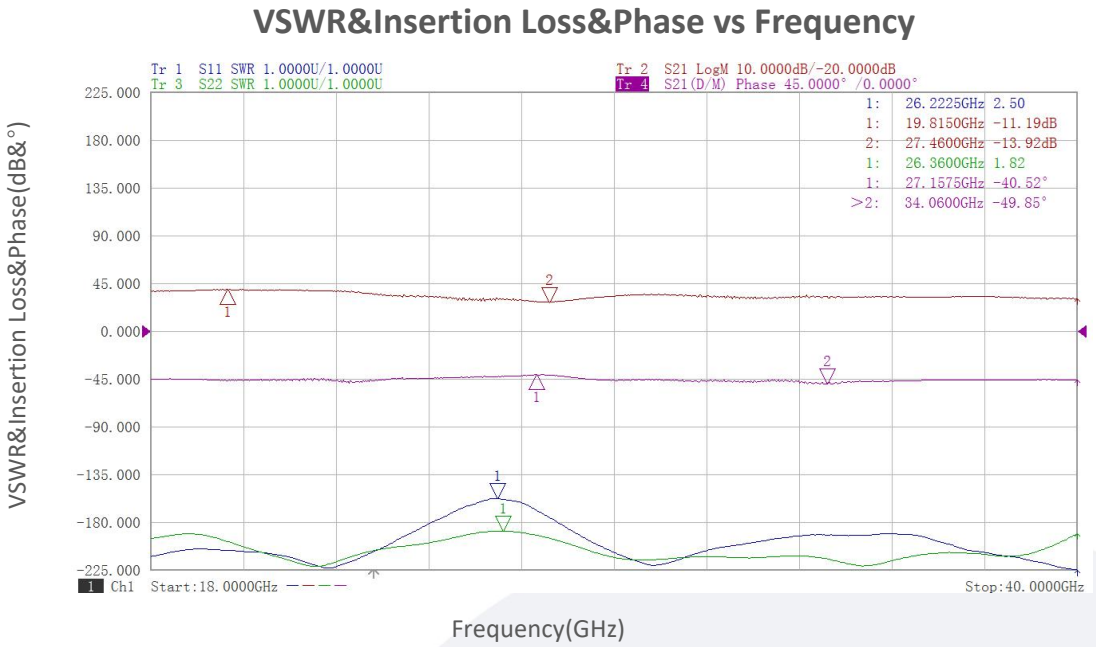
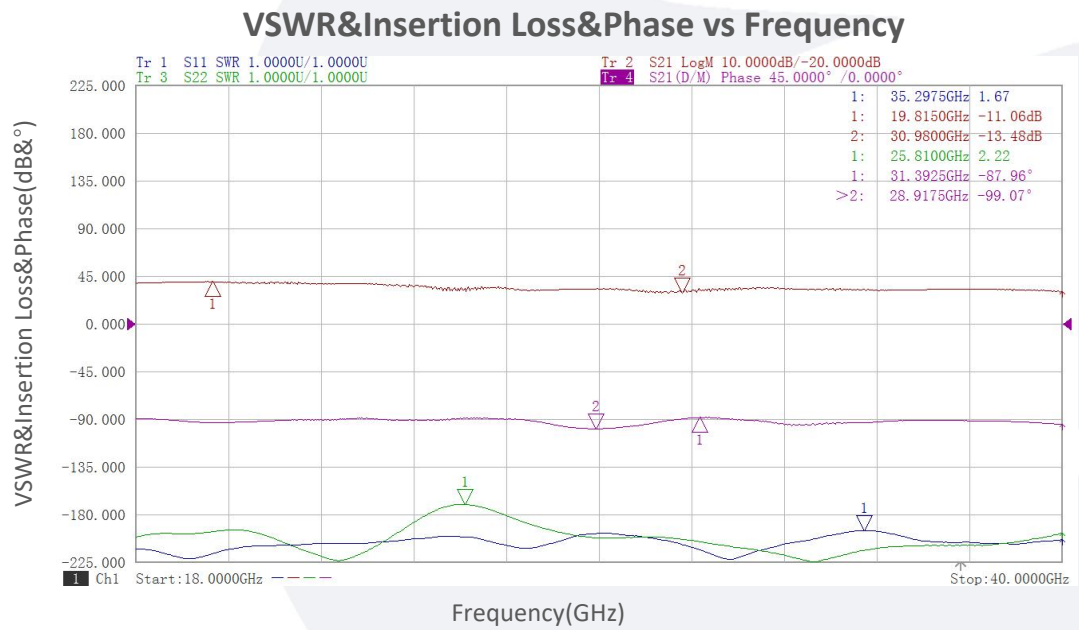
Typical Performance Data:

45° :



90° :



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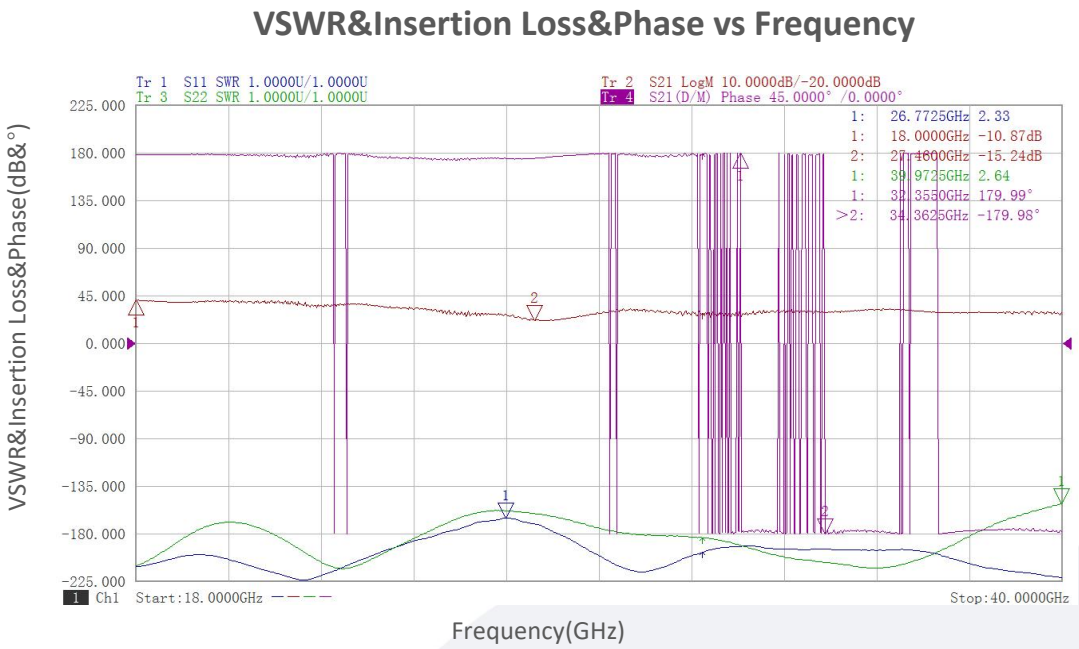
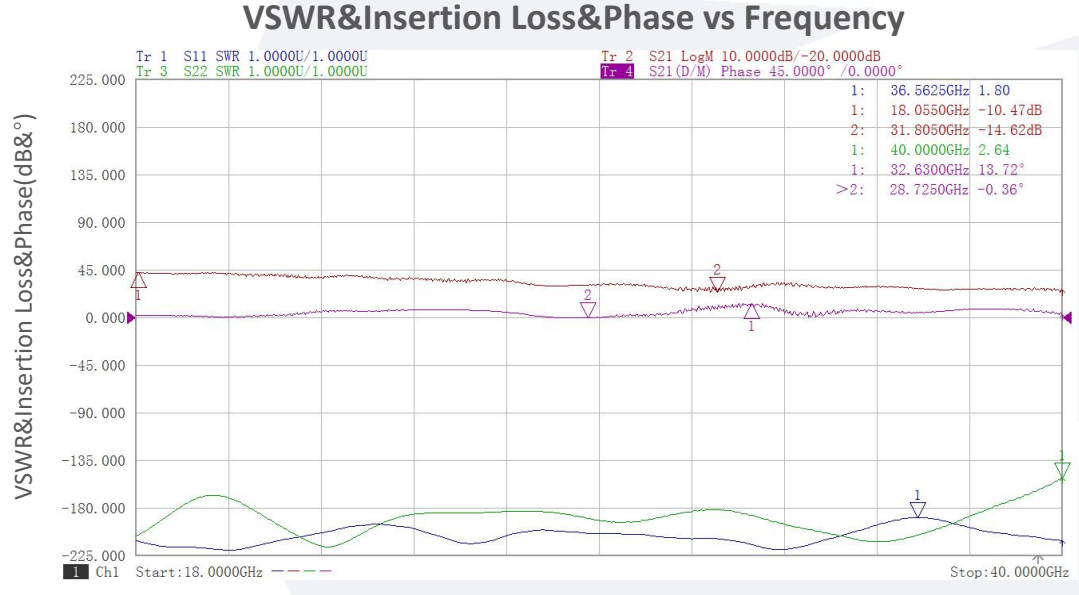
Typical Performance Data:

180° :



360° :



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