

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

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	18		40	GHz
插损 Insertion Loss		13		dB
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
移相范围 Phase Shift Range		360		°
相位精度 Phase accuracy		±4		°
耐功率 Power Handling			25	dBm
交寄生幅度 Insertion loss variation over phase range			±1	dB
切换时间 Switching speed		20		ns
直流电压 DC Voltage		+5		V DC
直流电流 DC Supply Current		30		mA
控制位数 Number of Bits		6		Bit

绝对最大值 Absolute Maximum Ratings :

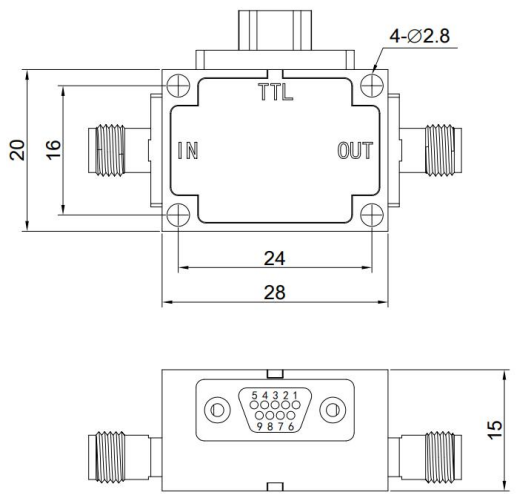
描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	+5 (+5%)	V
射频输入功率 RF Input Power	25	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

环境和机械特性 Envrionmental And Physical Characteristics:

描述 Description	参数 Parameter	单位 Units
操作温度 Operating Temerature	-55 To +125	°C
存储温度 Storage Temerature	-55 to +125	°C
材质 Material	Al	
表面处理 Finish	Gold Plated	
输入/输出接口 Input /Output Connector	2.92 Female	
直流控制接口 DC and control interface	J30J-9ZKP	

外形图 Outline Drawing:

Unit:mm



真值表 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

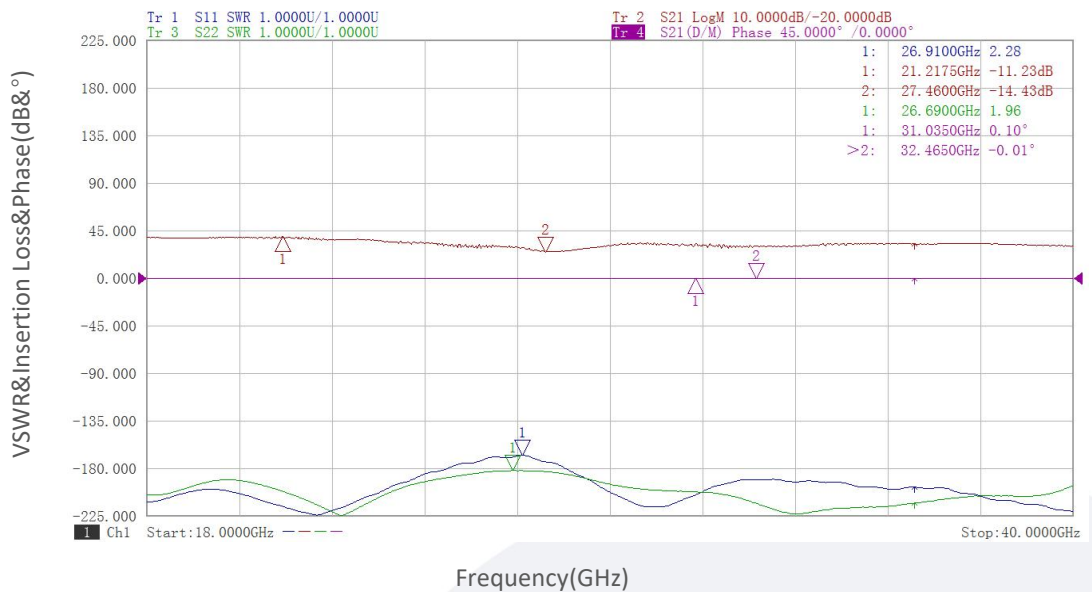
订货信息 Ordering Information:

标准型号 Base Number	描述 Desciption	版本号 Revision
TLDP18G40G-360-6-A	6-Bit Digital Phase Shifter,18-40GHz,2.92mm	Rev.1.1

典型曲线 Typical Performance Data:

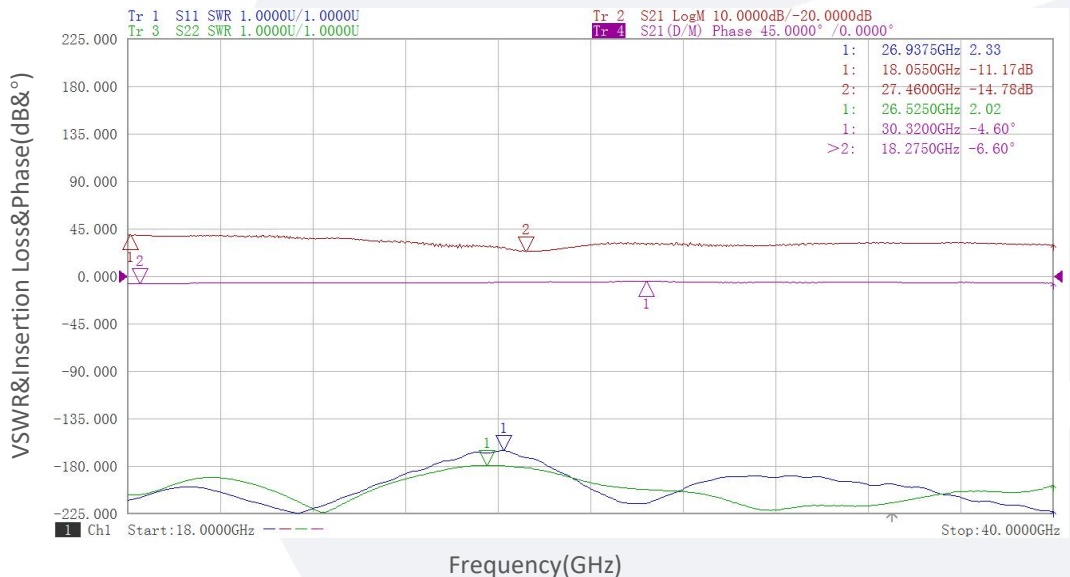
0° :

VSWR&Insertion Loss&Phase vs Frequency



5.625° :

VSWR&Insertion Loss&Phase vs Frequency

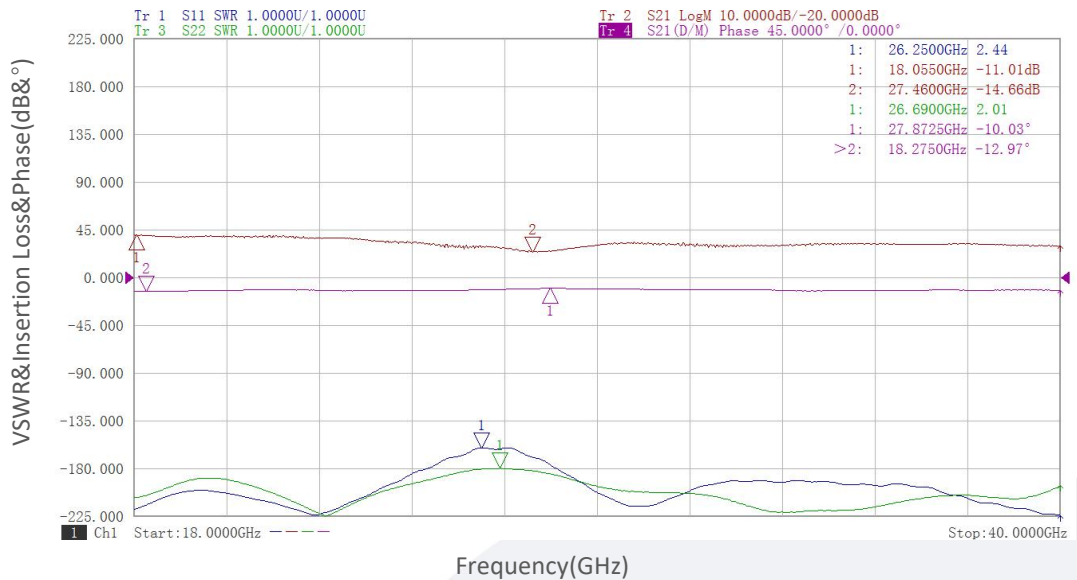


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

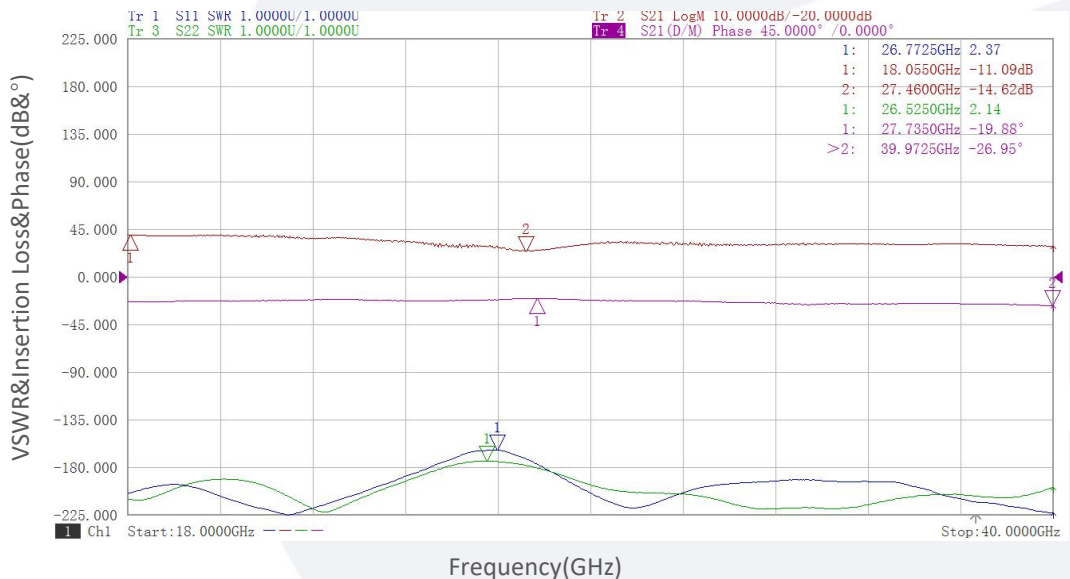
11.25° :

VSWR&Insertion Loss&Phase vs Frequency



22.5° :

VSWR&Insertion Loss&Phase vs Frequency

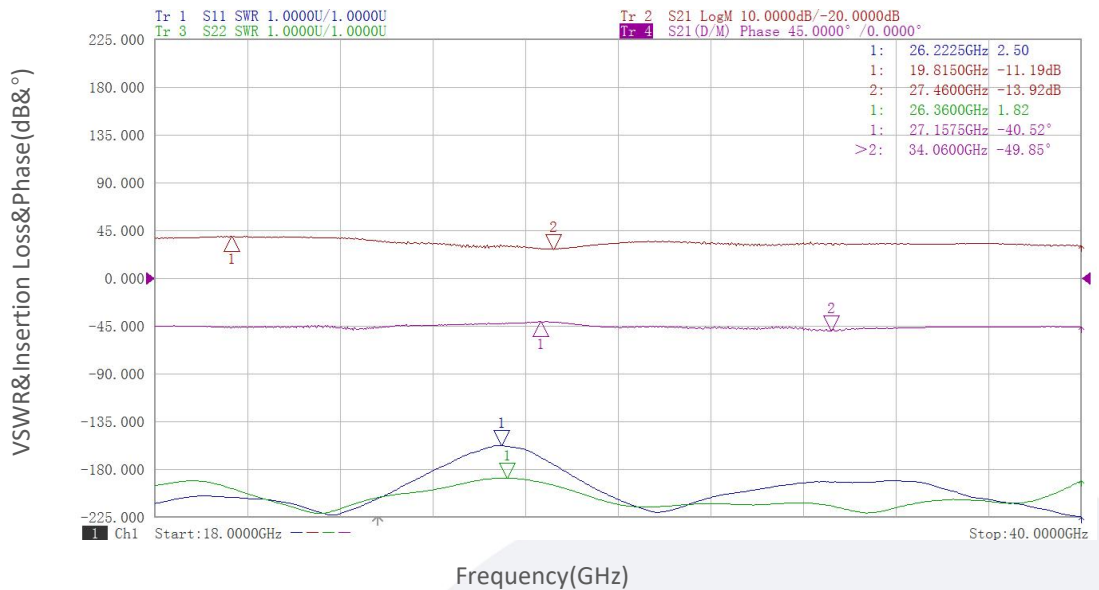


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

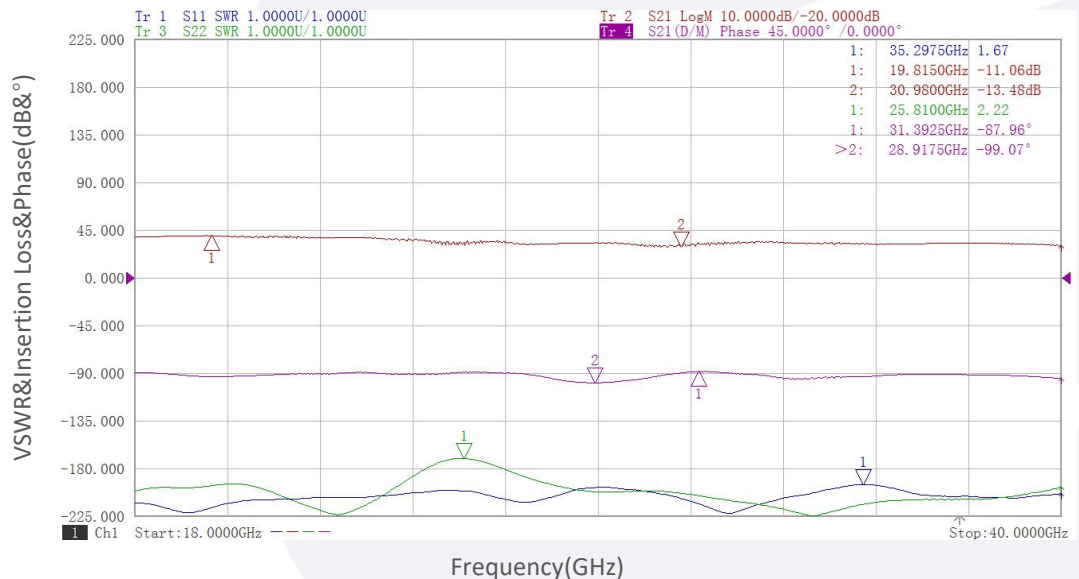
45° :

VSWR&Insertion Loss&Phase vs Frequency



90° :

VSWR&Insertion Loss&Phase vs Frequency

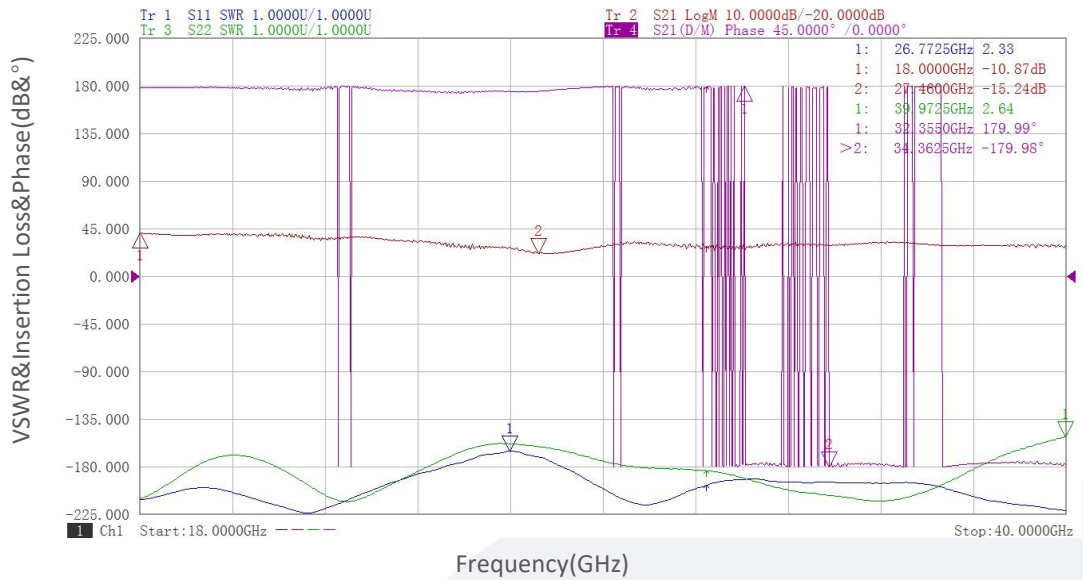


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典型曲线 Typical Performance Data:

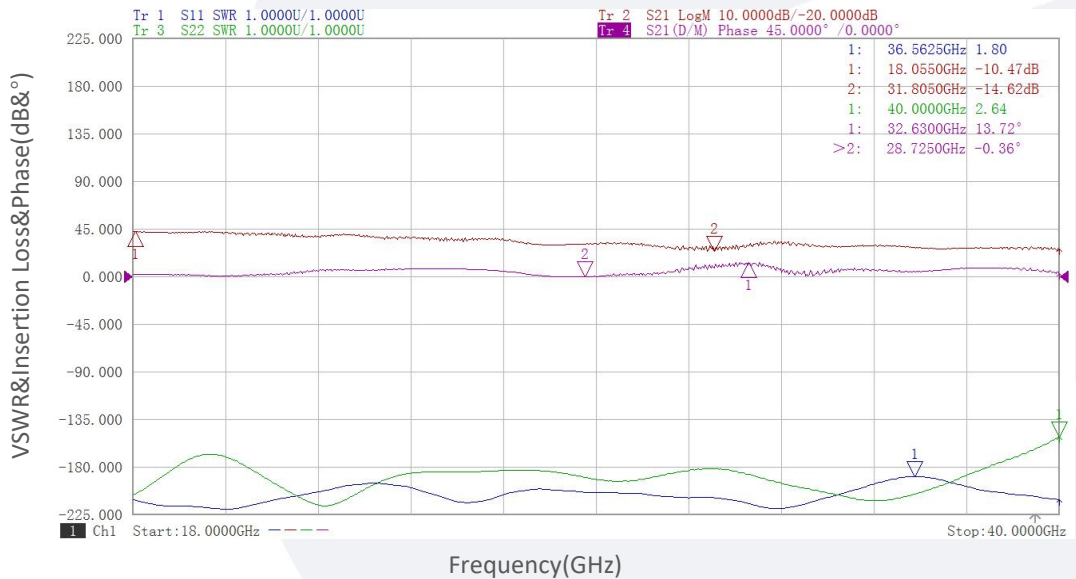
180° :

VSWR&Insertion Loss&Phase vs Frequency



360° :

VSWR&Insertion Loss&Phase vs Frequency



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