

# 北京天华中威科技有限公司

## TSP-008021G3-VD-6 宽带移相器

### 技术说明书



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同轴

## 数字移相器

TSP-008021G3-VD-6

50  $\Omega$       0.8 to 2.1 GHz

### 特性

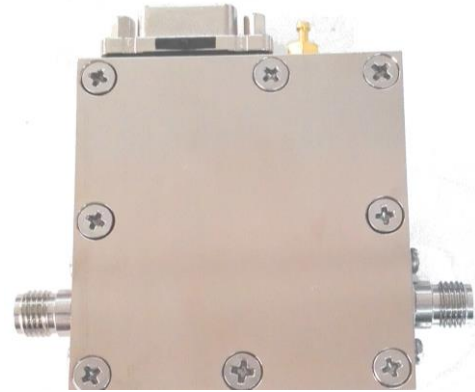
- 宽带: 0.8 ~ 2.1 GHz
- 低插入损耗: 6 dB
- 位数 6Bit
- 相位变化范围360°

### 应用

- 电子战接收机
- 气象及军用雷达
- 通讯卫星
- 波束形成模块
- 相取消

### 技术指标

TA=+25°C Vdd=+5V Vc=0/+5V 50 Ohm 系统



指标参数	条件	最小值	典型值	最大值	单位
频率范围		0.8	-	2.1	GHz
插入损耗	全频率范围	-	6.0	-	dB
入口/出口回波损耗	全频率范围	-		-10	dB
相位误差	全频率范围	-	+/- 2.0	-	deg
均方值误差		-6		+12	deg
输入压缩 P1dB			10		dBm
位控制电压		L/0V		H/5V	V
电压/电流	5 V	-	-	20	mA



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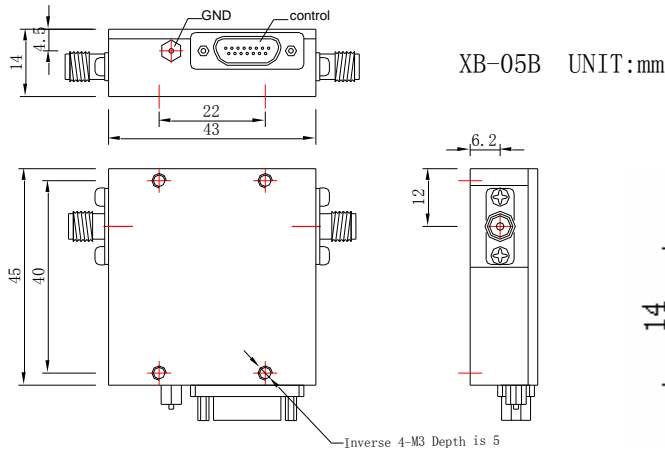
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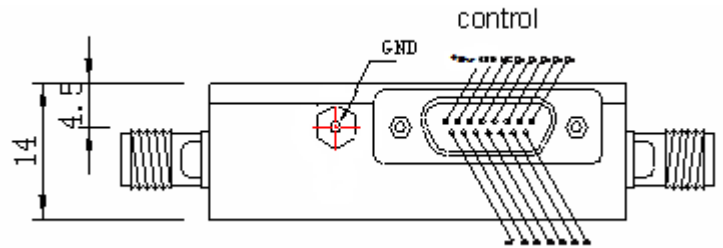
50 Ω

0.8 to 2.1 GHz

外形尺寸图



控制图



极限参数

操作温度	-40°C to 70°C
储存温度	-55°C to 100°C
电源电压(max)	8V
控制电压(max)	
最大入口功率	10dBm

State	Voltage
Low(0)	0 to +0.5V
High(1)	+3 to +5V(Note 5)

Note 5 : 内置上拉电阻 (约500 kΩ) , 悬空时代表High

超出该极限值有可能对器件造成损坏!

典型曲线图

Control Voltage Input						Phase Shift (Degrees) RFIN - RFout
D5	D4	D3	D2	D1	D0	
1	1	1	1	1	1	Reference*
1	1	1	1	1	0	5.625
1	1	1	1	0	1	11.25
1	1	1	0	1	1	22.5
1	1	0	1	1	1	45.0
1	0	1	1	1	1	90.0
0	1	1	1	1	1	180.0
0	0	0	0	0	0	354.375



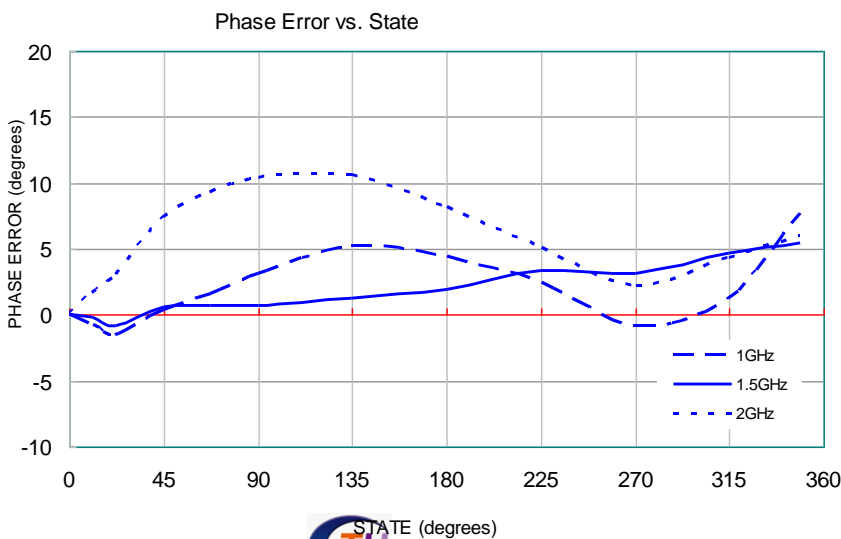
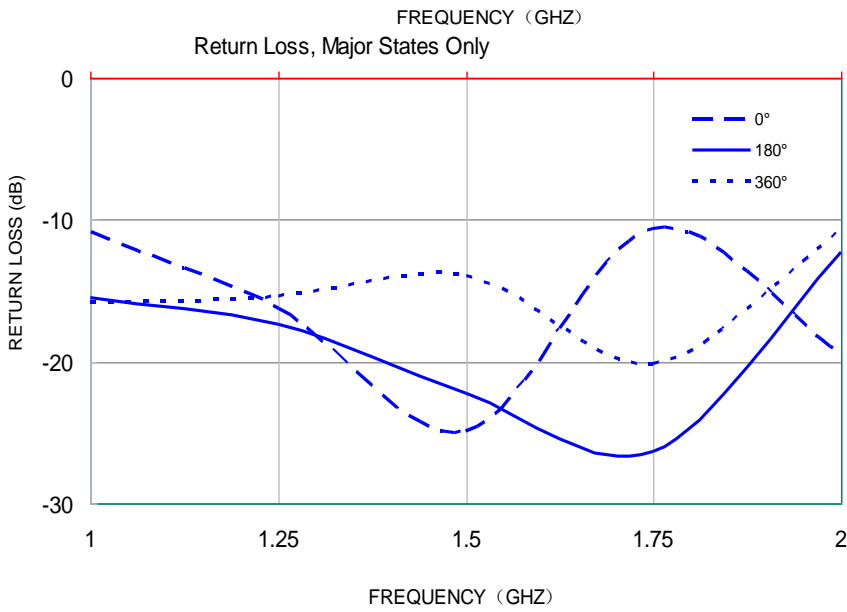
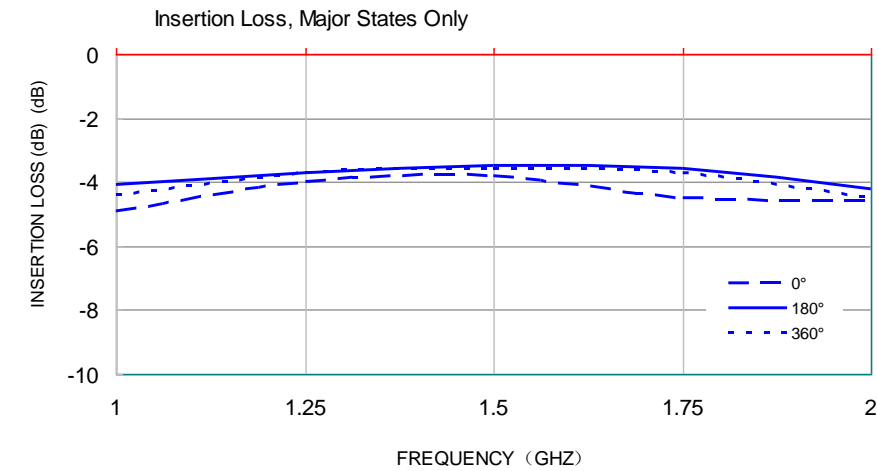
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50 Ω

0.8 to 2.1 GHz



STATE (degrees)

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## 测试数据记录

Theoretical Phase (Degree)	input power (dBm)	Insertion Loss (dB) at middle Frequency	Return Loss (dB) at middle Frequency	Phase Degree		
				0.8GHz	1.5GHz	2.1GHz
Ref	0	-3.90	-18.70	Ref	Ref	Ref
5.625	0	-3.90	-18.80	6.00	6.40	8.5
11.25	0	-3.90	-18.80	11.20	11.70	14.6
22.50	0	-3.80	-18.90	22.10	22.70	28.8
45.00	0	-3.80	-18.70	45.30	46.50	58.2
90.00	0	-3.60	-19.50	88.20	89.70	98.7
180.00	0	-3.50	-23.90	176.30	182.10	197
354.375	0	-3.50	-17.20	392.10	357.10	363.5

