

**Part No.: TBG-1042-3S-90-SMD**

## 90 Degree 3dB Bridge

### 电气特性 Electrical:

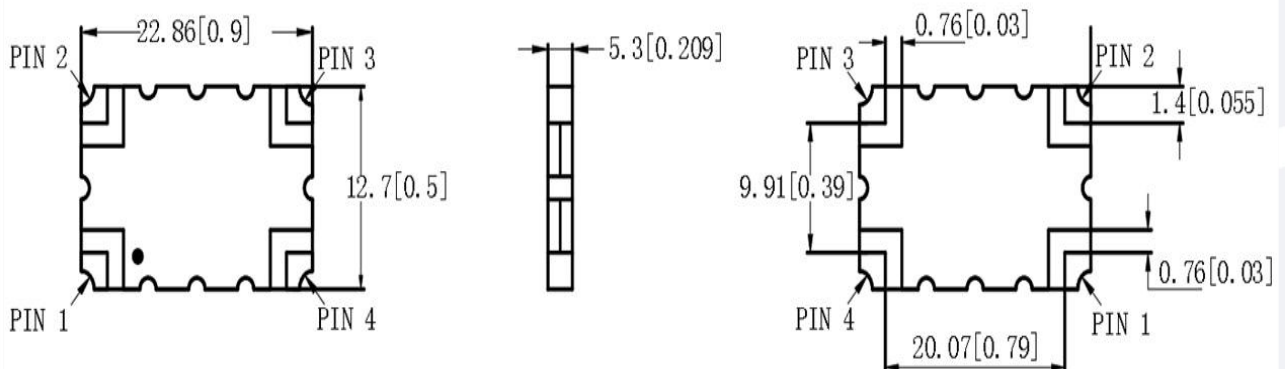
工作频率 Frequency Range:	1000-4200MHz
耦合度 Coupling :	3dB
插入损耗 Insertion Loss:	0.55dB Max
隔离度 Isolation:	-20.0dB Min
驻波 VSWR:	1.35:1 Max
幅度平衡 Amplitude Balance:	$\pm 1.1(1G)$ dB max
相位平衡 Phase Balance:	$90 \pm 3.5$ degree
耐功率 Power Handling:	130 Watt
阻抗 Impedance:	50 OHMS

### 机械特性 Mechanical:

温度范围 Temperature Range:	$-55^{\circ} \text{C} - +105^{\circ} \text{C}$
大小 Size:	22.86mm*12.7mm
厚度 Thickness:	5.3mm
相对湿度 Relative Humidity:	0 ~ 90%

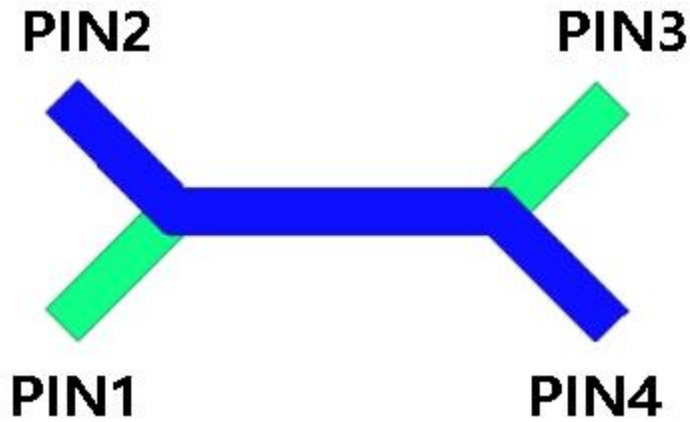
### 外形尺寸 Outline Drawing:

Unit: mm(Inches)



**端口配置表 Port Configuration Table:**

Hybrid Coupler Pin Configuration



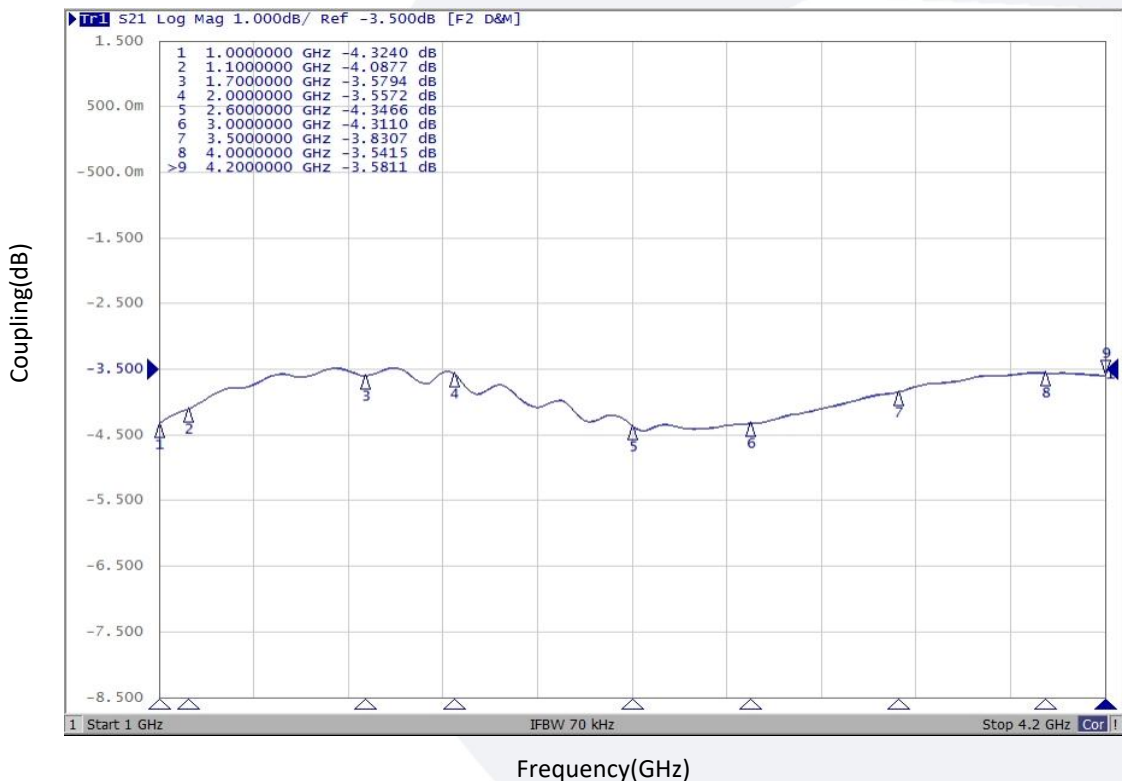
Configuration	Pin1	Pin2	Pin3	Pin4
Splitter	Input	$-3\text{dB} < \theta$	$-3\text{dB} < \theta - 90^\circ$	Isolated
Splitter	$-3\text{dB} < \theta$	Input	Isolated	$-3\text{dB} < \theta - 90^\circ$
Splitter	$-3\text{dB} < \theta - 90^\circ$	Isolated	Input	$-3\text{dB} < \theta$
Splitter	Isolated	$-3\text{dB} < \theta - 90^\circ$	$-3\text{dB} < \theta$	Input
Combiner	$-3\text{dB} < \theta - 90^\circ$	Output	Isolated	$-3\text{dB} < \theta$
Combiner	Output	$-3\text{dB} < \theta - 90^\circ$	$-3\text{dB} < \theta$	Isolated
Combiner	Isolated	$-3\text{dB} < \theta$	$-3\text{dB} < \theta - 90^\circ$	Output
Combiner	$-3\text{dB} < \theta$	Isolated	Output	$-3\text{dB} < \theta - 90^\circ$

### Typical Performance Data

Frequency	MHz	1000	1100	1700	2000	2600	3000	3500	4000	4200	
Coupling	dB	-4.32	-4.09	-3.58	-3.56	-4.35	-4.31	-3.83	-3.54	-3.58	
Transmission	dB	-2.20	-2.40	-2.95	-2.90	-2.67	-2.71	-3.11	-3.43	-3.48	
Insertion Loss	dB	-0.17	-0.18	-0.26	-0.22	-0.40	-0.42	-0.45	-0.46	-0.51	
Isolation	dB	-42.04	-39.49	-28.95	-25.80	-22.30	-21.77	-23.49	-26.66	-27.45	
Phase	degree	89.98	89.80	89.81	90.20	90.41	92.57	92.45	91.94	91.75	
Return Loss	Input	dB	1.07	1.07	1.08	1.16	1.33	1.27	1.07	1.11	1.12
	Coupler	dB	1.09	1.09	1.03	1.09	1.18	1.11	1.04	1.09	1.09
	Transmission	dB	1.00	1.02	1.16	1.22	1.24	1.23	1.24	1.16	1.14
	Isolated	dB	1.04	1.04	1.11	1.15	1.18	1.14	1.26	1.29	1.25

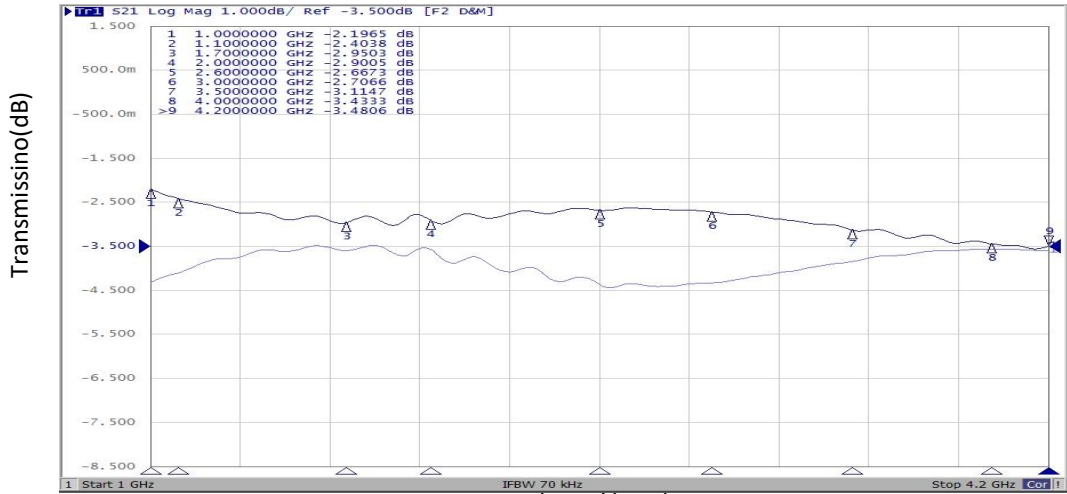
### 典型曲线 Typical Performance Data:

### Coupling vs Frequency

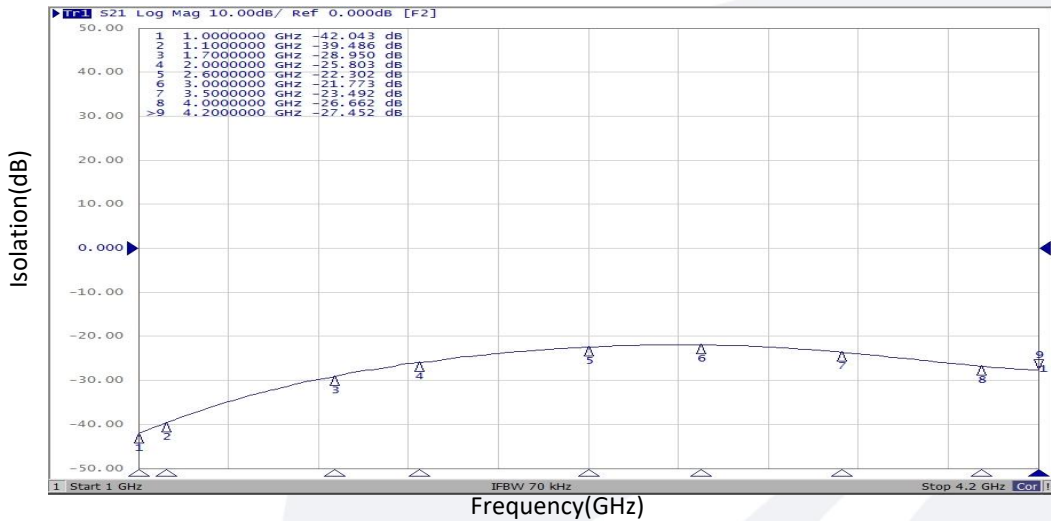


典型曲线 Typical Performance Data:

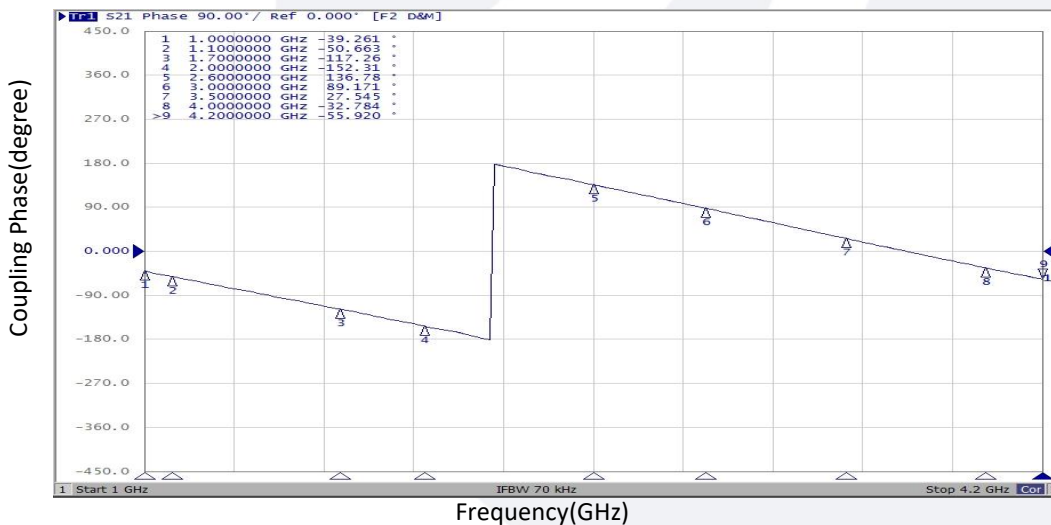
Transmission vs Frequency



Isolation vs Frequency

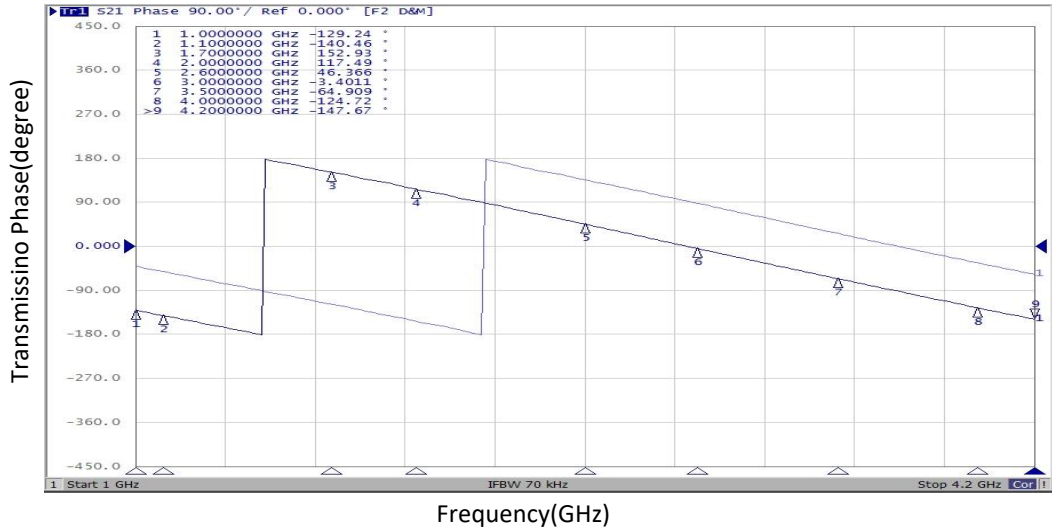


Coupling Phase vs Frequency



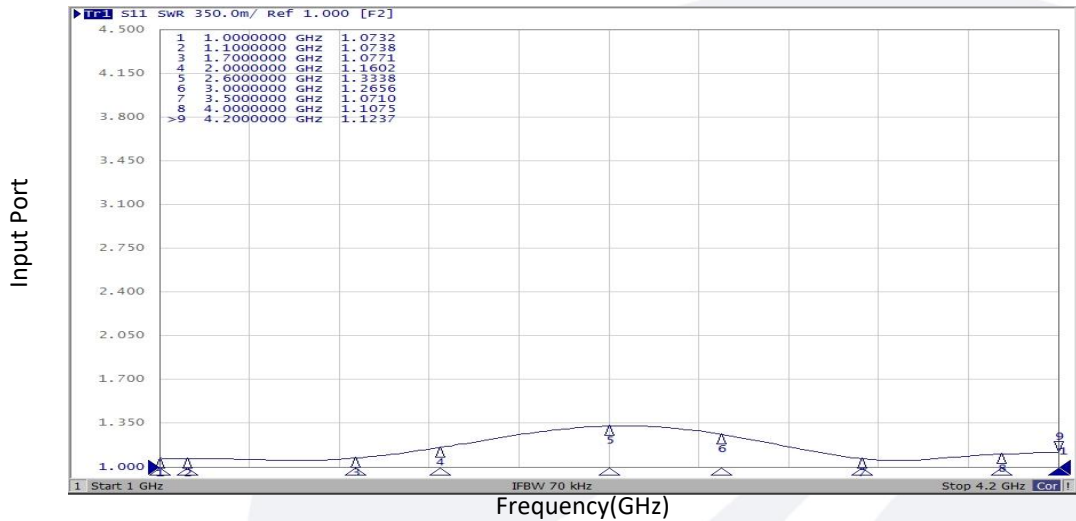
典型曲线 Typical Performance Data:

Transmission Phase vs Frequency



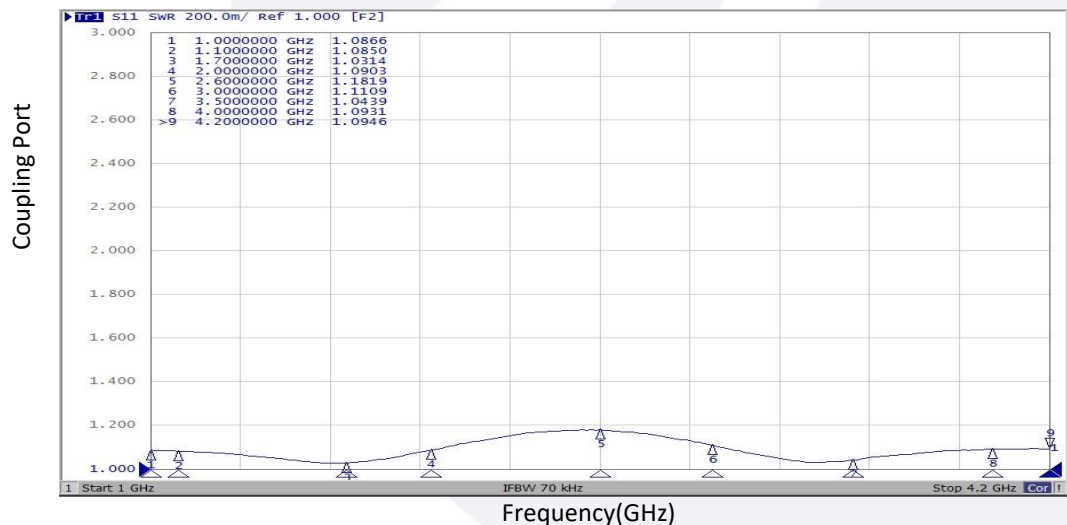
Frequency(GHz)

Input Port vs Frequency



Frequency(GHz)

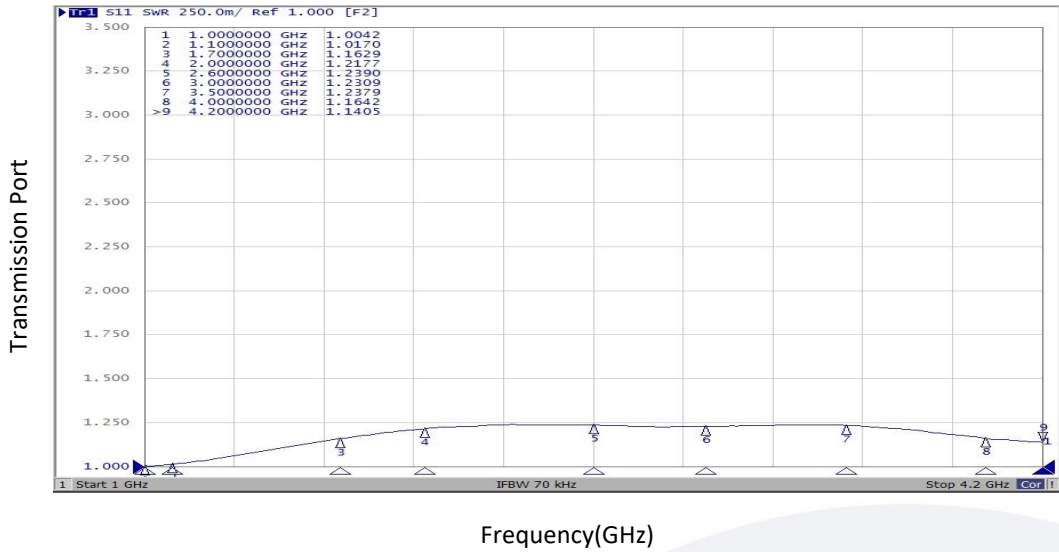
Coupling Port vs Frequency



Frequency(GHz)

典型曲线 Typical Performance Data:

Transmission Port vs Frequency



Isolation Port vs Frequency

