

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

90 Degree 3dB Bridge

Electrical:

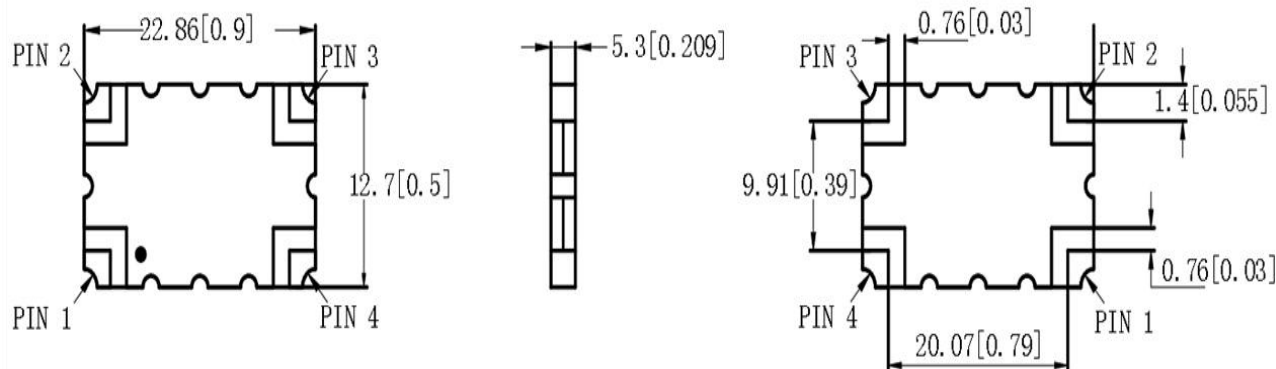
Frequency Range:	1000-4200MHz
Coupling :	3dB
Insertion Loss:	0.55dB Max
Isolation:	-20.0dB Min
VSWR:	1.35:1 Max
Amplitude Balance:	$\pm 1.1(1G)$ dB max
Phase Balance:	90 ± 3.5 degree
Power Handling:	130 Watt
Impedance:	50 OHMS

Mechanical:

Temperature Range:	-55° C - +105° C
Size:	22.86mm*12.7mm
Thickness:	5.3mm
Relative Humidity:	0 ~ 90%

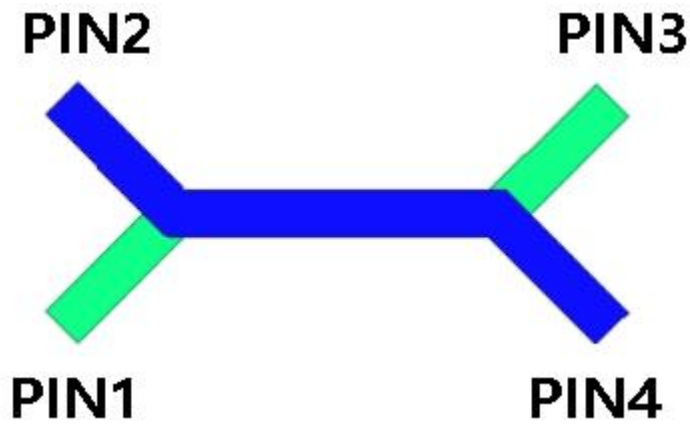
Outline Drawing:

Unit: mm(Inches)



Port Configuration Table:

Hybrid Coupler Pin Configuration



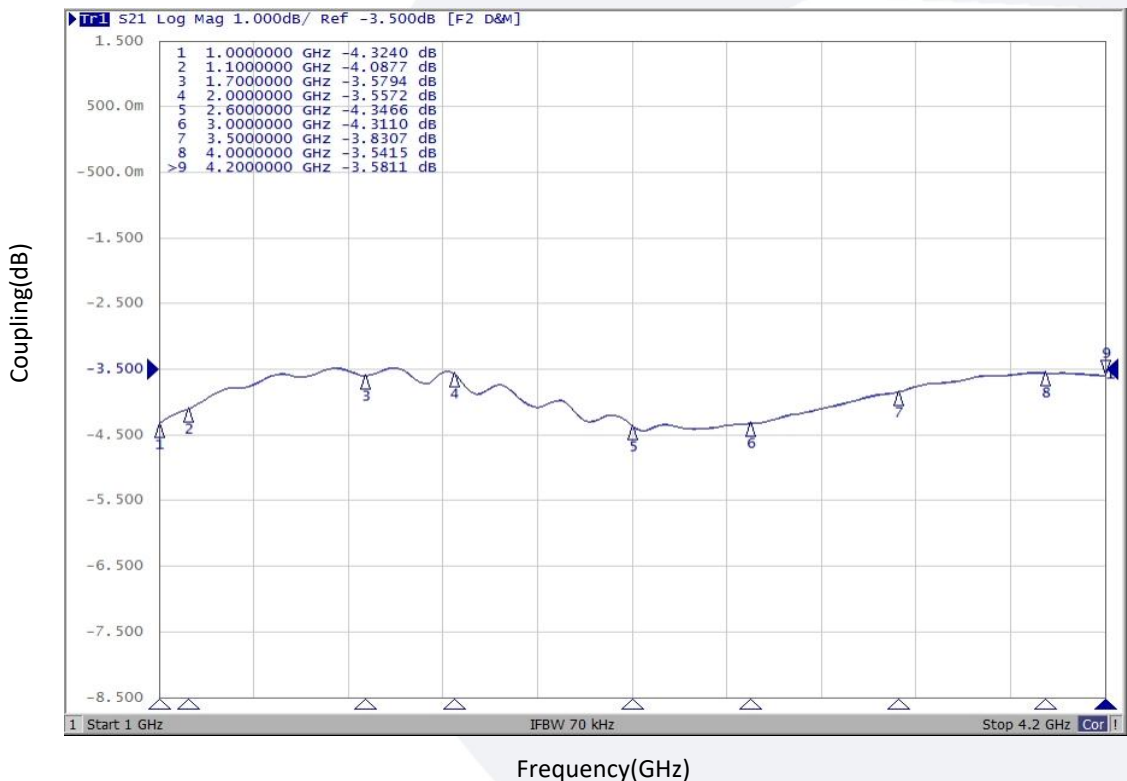
Configuration	Pin1	Pin2	Pin3	Pin4
Splitter	Input	$-3\text{dB} < \theta$	$-3\text{dB} < \theta - 90^\circ$	Isolated
Splitter	$-3\text{dB} < \theta$	Input	Isolated	$-3\text{dB} < \theta - 90^\circ$
Splitter	$-3\text{dB} < \theta - 90^\circ$	Isolated	Input	$-3\text{dB} < \theta$
Splitter	Isolated	$-3\text{dB} < \theta - 90^\circ$	$-3\text{dB} < \theta$	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	1.12
	Coupler	dB	1.09	1.09	1.03	1.09	1.18	1.11	1.04	1.09
	Transmission	dB	1.00	1.02	1.16	1.22	1.24	1.23	1.24	1.16
	Isolated	dB	1.04	1.04	1.11	1.15	1.18	1.14	1.26	1.25

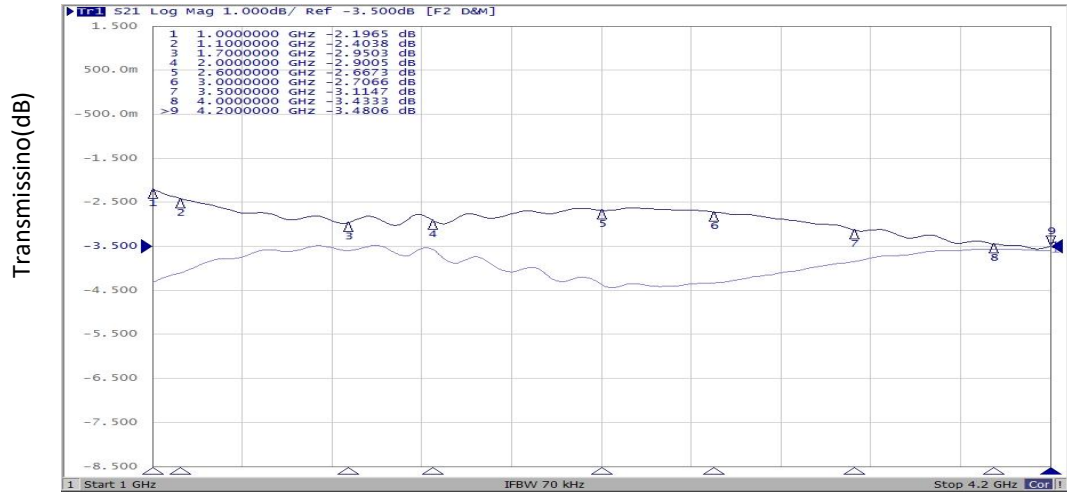
Typical Performance Data:

Coupling vs Frequency

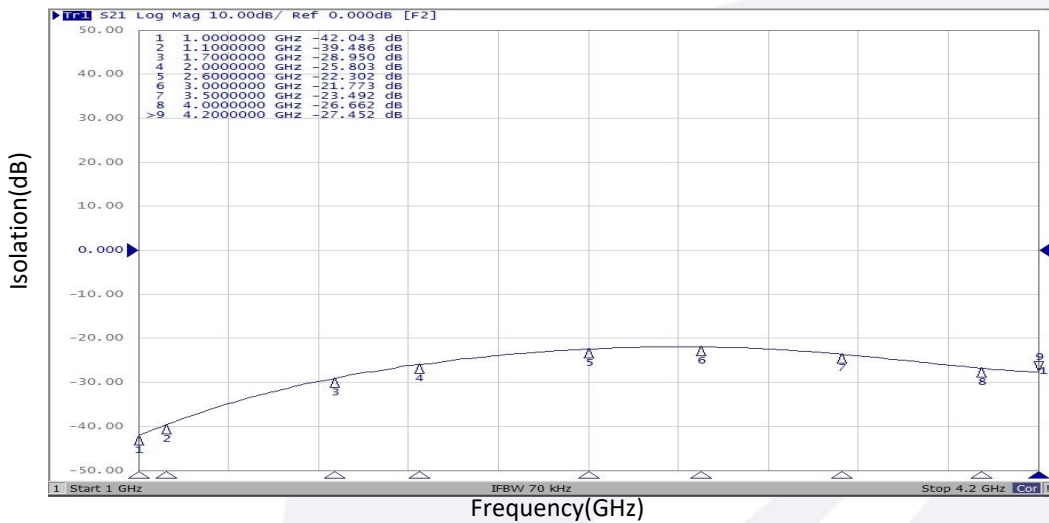


Typical Performance Data:

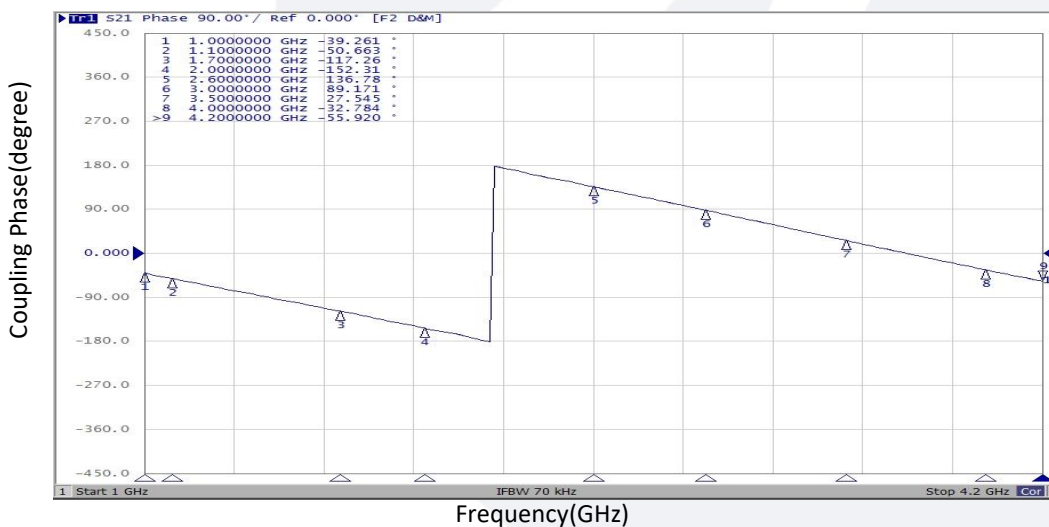
Transmission vs Frequency



Isolation vs Frequency

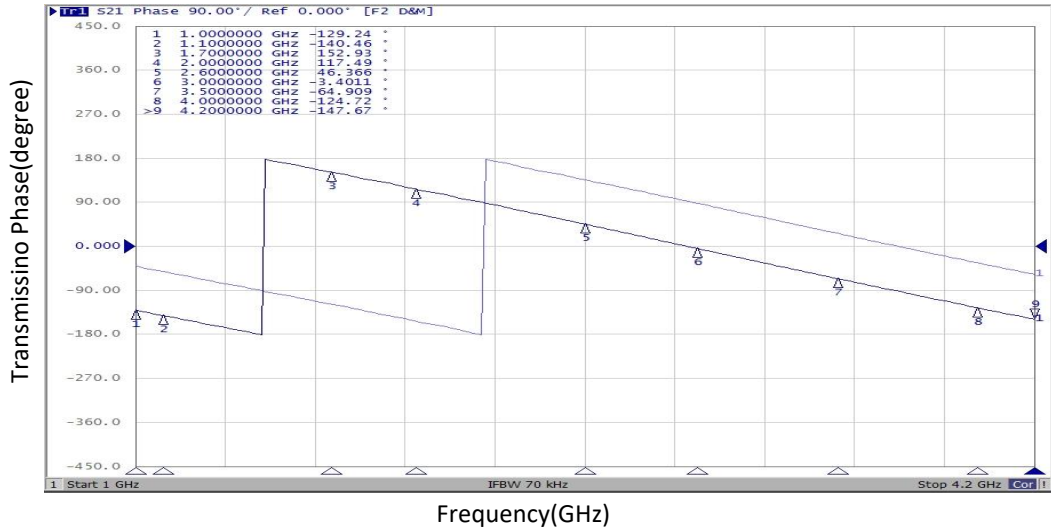


Coupling Phase vs Frequency

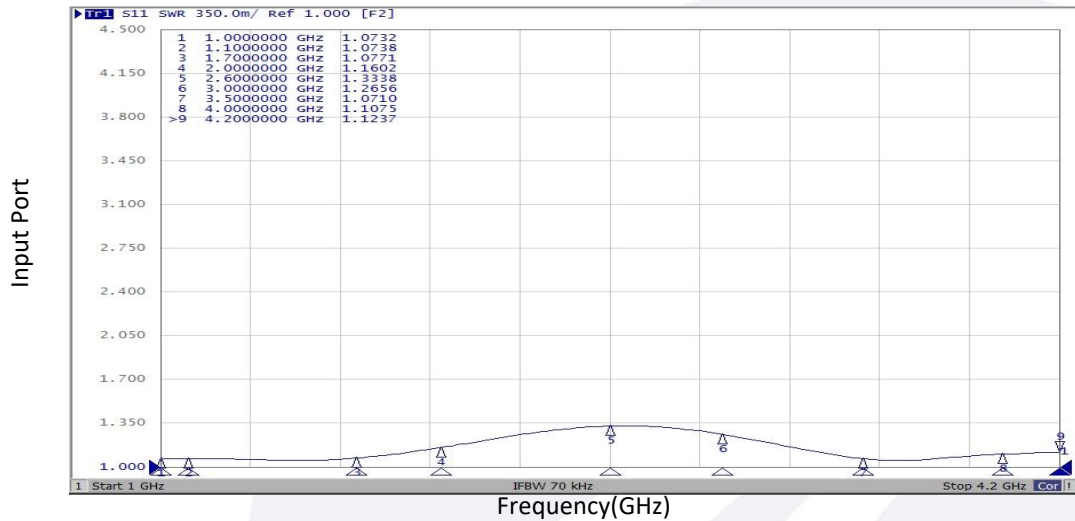


Typical Performance Data:

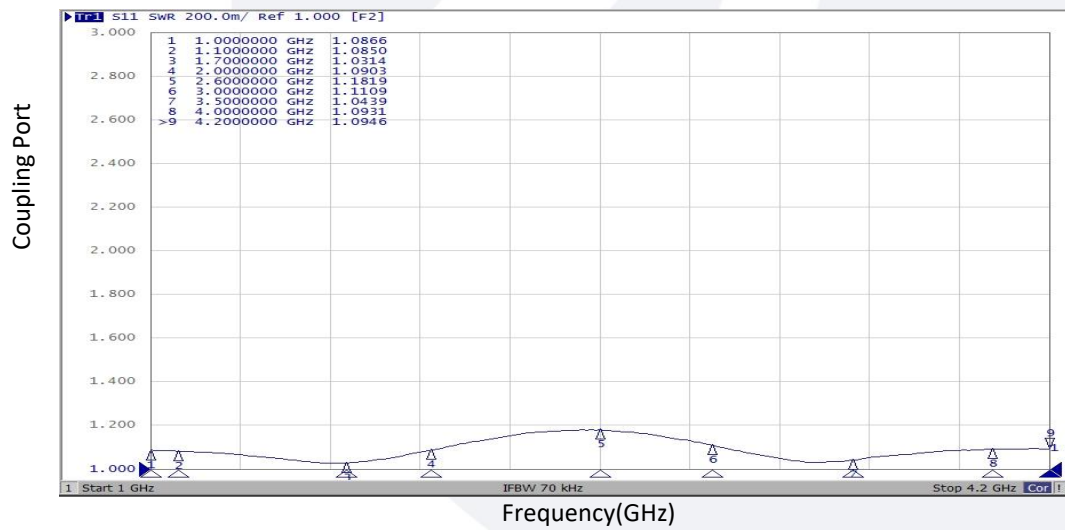
Transmission Phase vs Frequency



Input Port vs Frequency

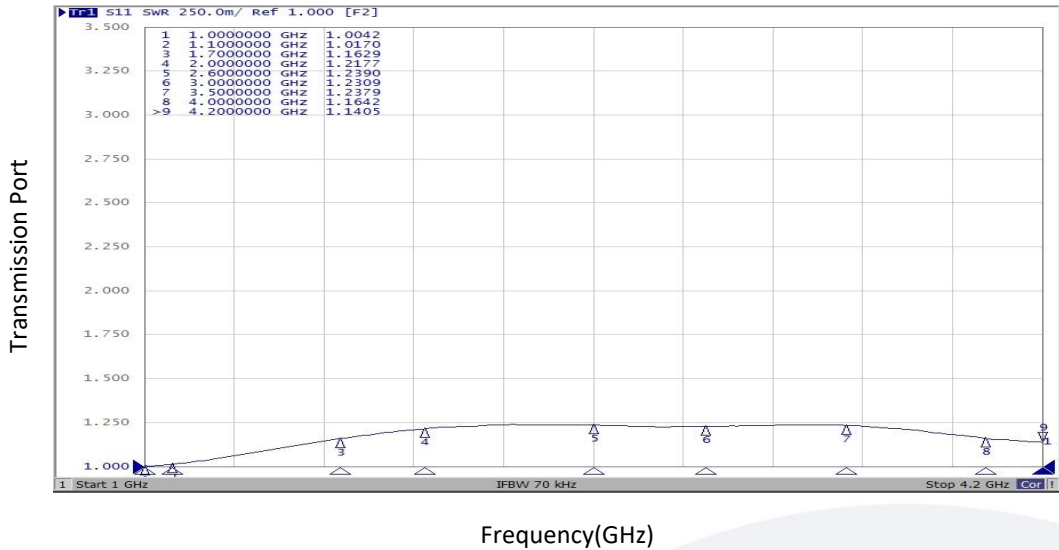


Coupling Port vs Frequency



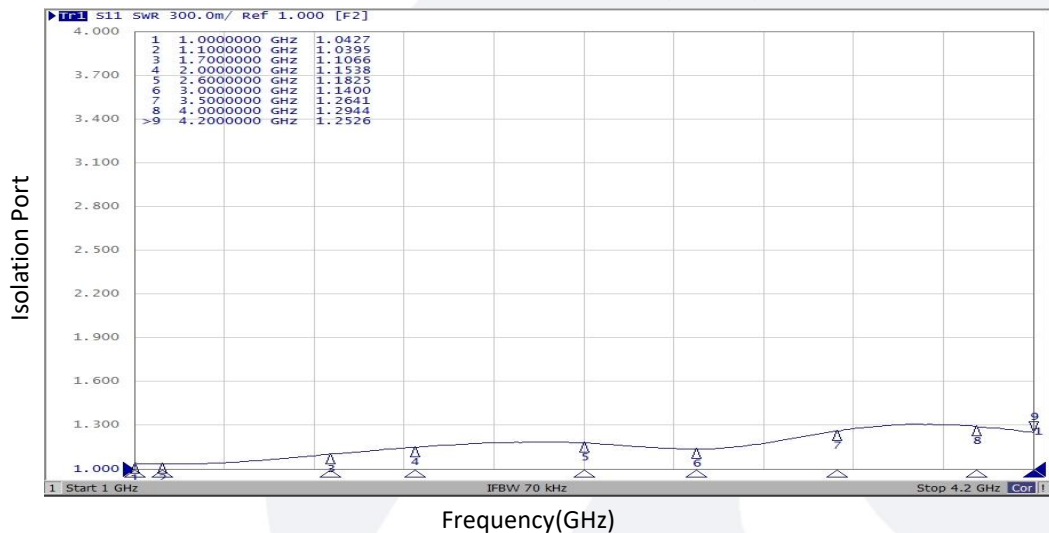
Typical Performance Data:

Transmission Port vs Frequency



Frequency(GHz)

Isolation Port vs Frequency



Frequency(GHz)