

Part No.: TBG-2060-3S-90-SMD-2

3dB Directional Coupler 0.09-0.45GHz

Electrical:

Frequency Range:	2000-6000MHz
Coupling :	3dB
Insertion Loss:	0.35dB Max
Isolation:	18 dB Min
VSWR:	1.40:1 Max
Amplitude Balance:	± 1.0 Max
Phase Balance:	90 ± 7.0 degree
Power Handling:	Avg.CW 350 Watt
Impedance:	50 OHMS

Mechanical:

Temperature Range:	-55° C - +105° C
Size:	14.22mm*8.89mm
Thickness:	3.5mm
Relative Humidity:	0 ~ 90%

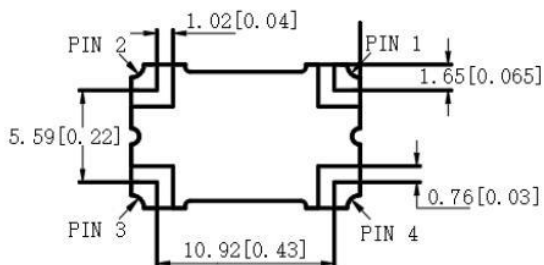
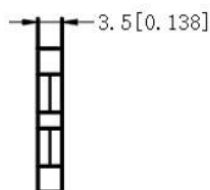
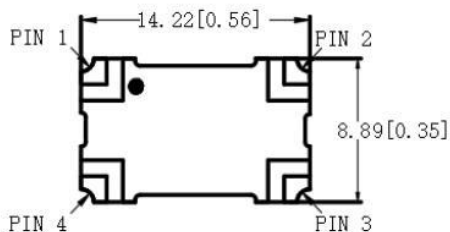
Outline Drawing:

Unit: mm

TOP VIEW

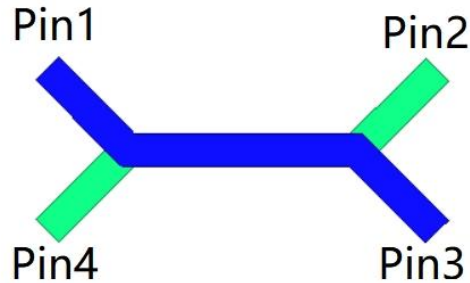
SIDE VIEW

BOTTOM VIEW



Port Configuration Table:

Hybrid Coupler Pin Configuration



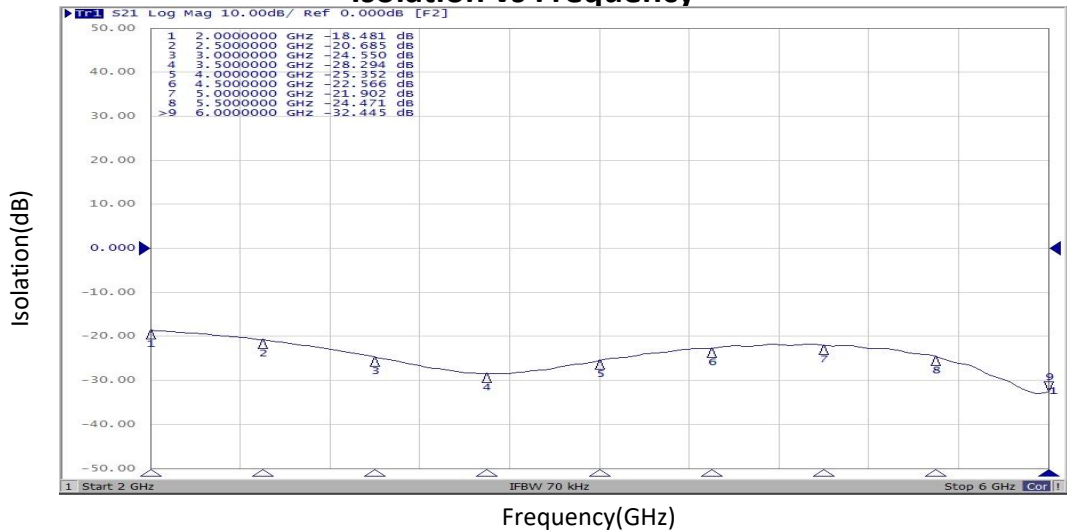
Configuration	PIN1	PIN2	PIN3	PIN4
Splitter	Input	Isolated	$-3\text{dB} < \theta < 90^\circ$	$-3\text{dB} < \theta$
Splitter	Isolated	Input	$-3\text{dB} < \theta$	$-3\text{dB} < \theta < 90^\circ$
Splitter	$-3\text{dB} < \theta < 90^\circ$	$-3\text{dB} < \theta$	Input	Isolated
Splitter	$-3\text{dB} < \theta$	$-3\text{dB} < \theta < 90^\circ$	Isolated	Input
Combiner	$A < \theta < 90^\circ$	$A < \theta$	Isolated	Output
Combiner	$A < \theta$	$A < \theta < 90^\circ$	Output	Isolated
Combiner	Isolated	Output	$A < \theta < 90^\circ$	$A < \theta$
Combiner	Output	Isolated	$A < \theta$	$A < \theta < 90^\circ$

Typical Performance Data

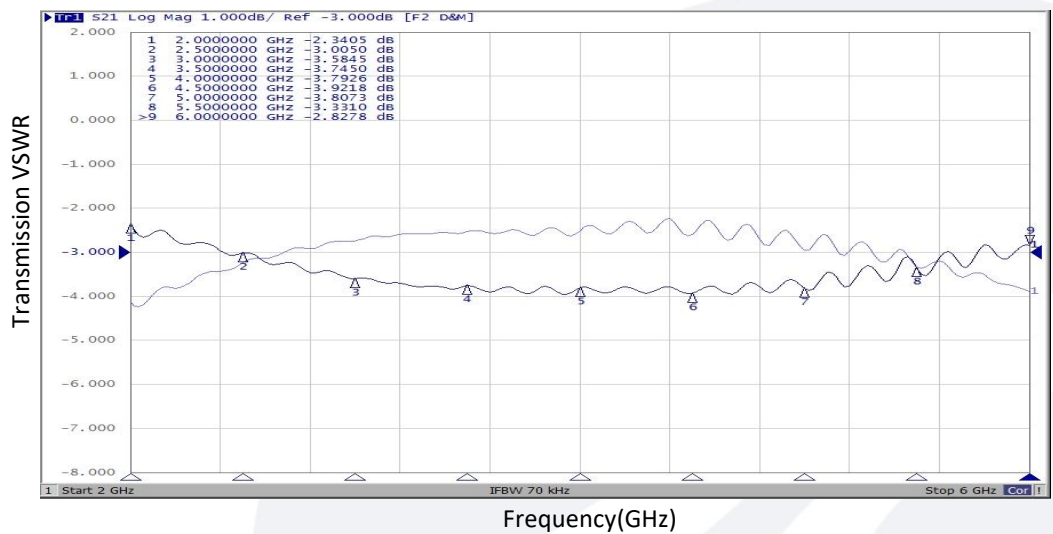
Frequency	MHz	2000	2500	3000	3500	4000	4500	5000	5500	6000
Coupling	dB	-4.14	-3.22	-2.72	-2.52	-2.50	-2.58	-2.94	-3.32	-3.88
Transmission	dB	-2.34	-3.01	-3.58	-3.75	-3.79	-3.92	-3.81	-3.33	-2.83
Insertion Loss	dB	-0.15	-0.12	-0.12	-0.12	-0.13	-0.19	-0.34	-0.33	-0.34
Isolation	dB	-18.48	-20.69	-24.55	-28.29	-25.35	-22.57	-21.90	-24.47	-32.45
Phase	degree	91.60	91.61	91.13	91.81	94.00	96.62	96.94	96.01	94.54
VSWR	Input	/	1.34	1.22	1.19	1.15	1.06	1.04	1.06	1.07
	coupler	/	1.38	1.22	1.15	1.15	1.18	1.25	1.25	1.03
	Transmissi on	/	1.38	1.27	1.21	1.17	1.09	1.07	1.16	1.22
	Isolated	/	1.27	1.24	1.20	1.15	1.15	1.24	1.29	1.11

Typical Performance Data:

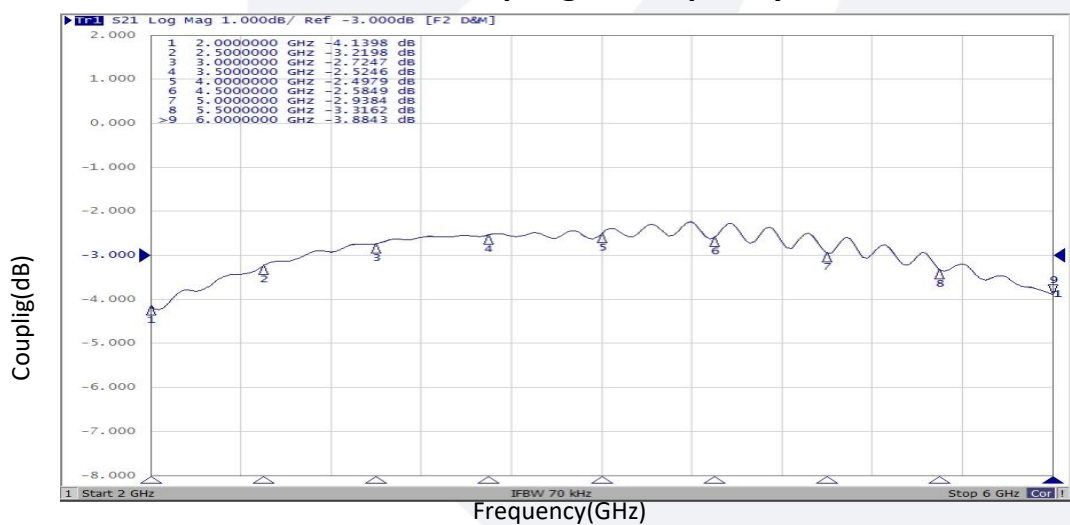
Isolation vs Frequency



Transmission VSWR vs Frequency

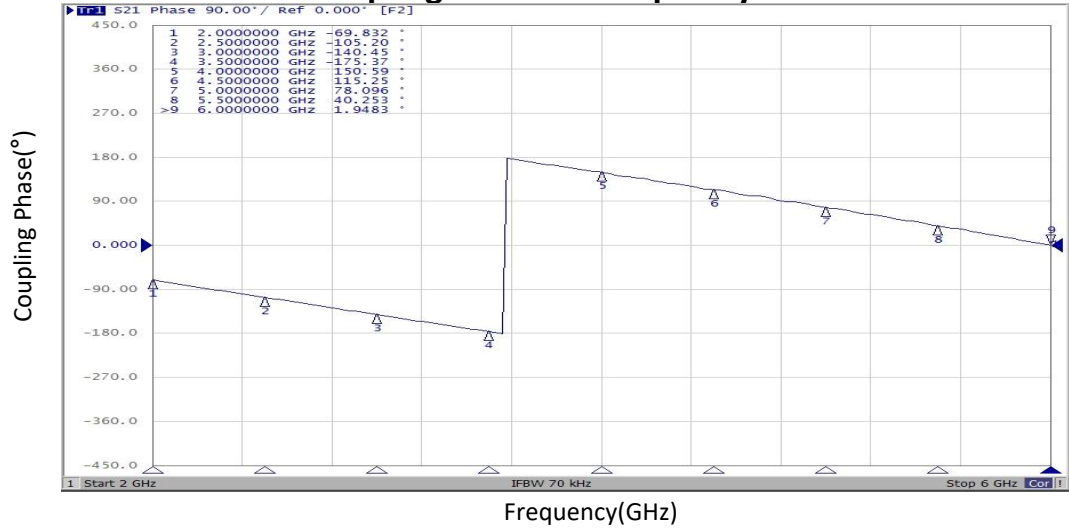


Coupling vs Frequency

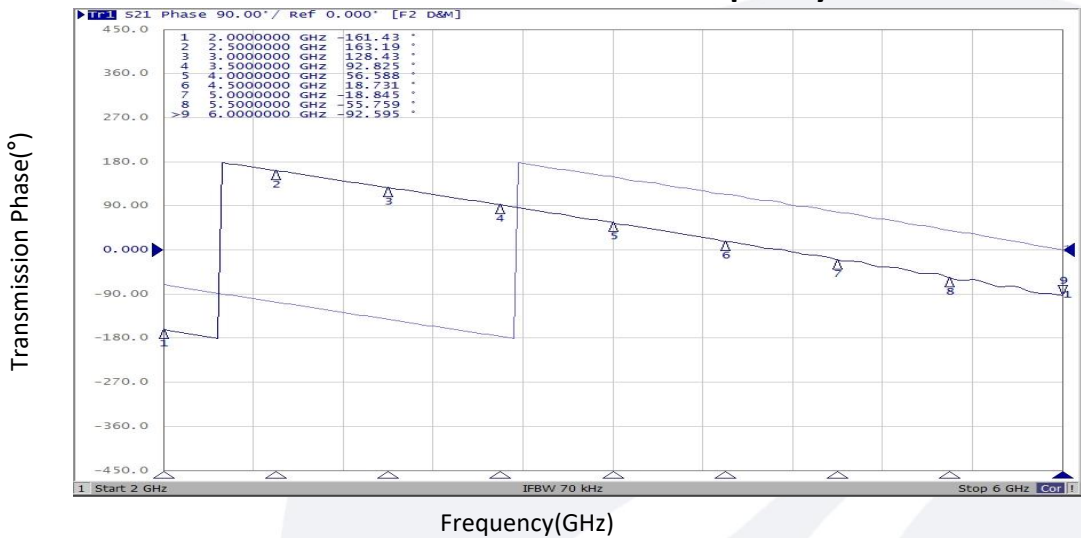


Typical Performance Data:

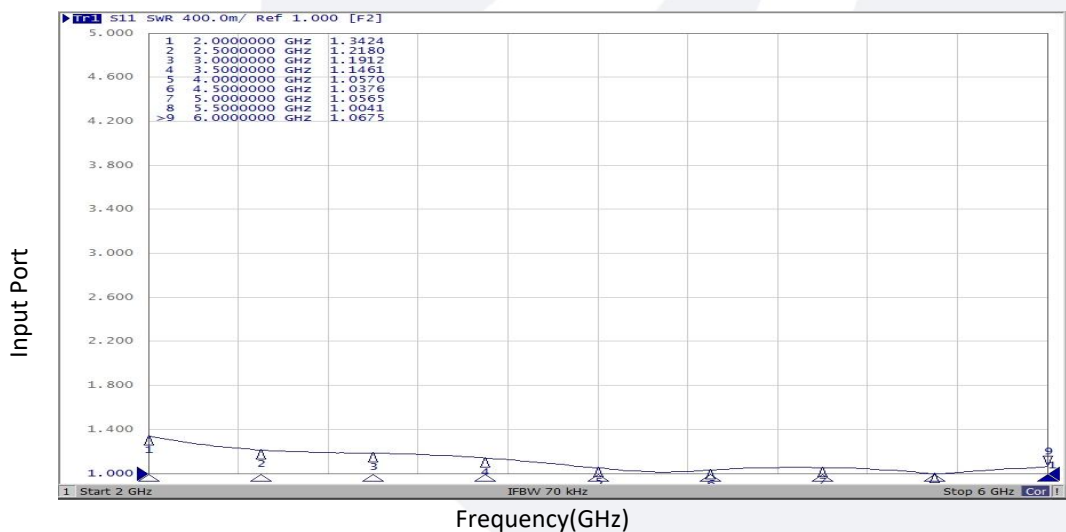
Coupling Phase vs Frequency



Transmission Phase vs Frequency

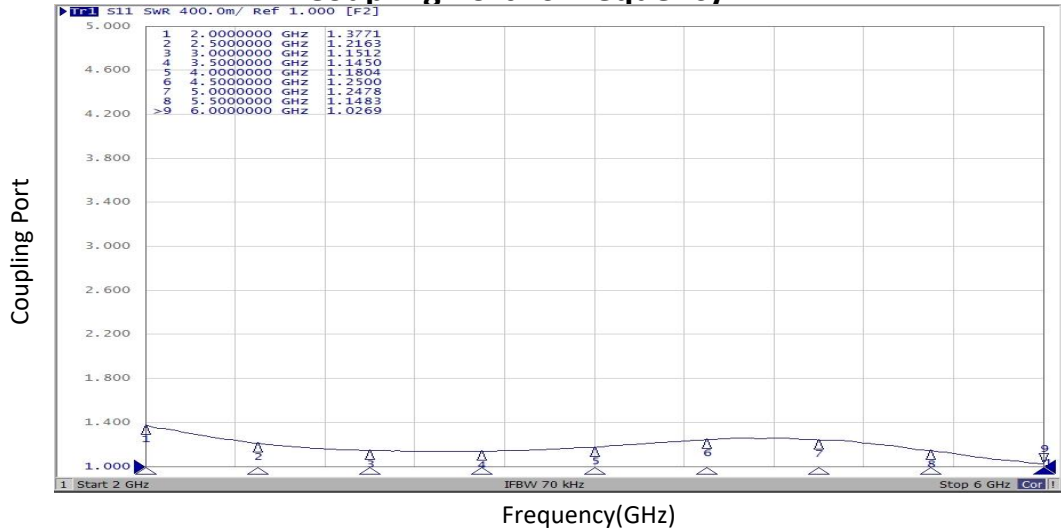


Input Port vs Frequency

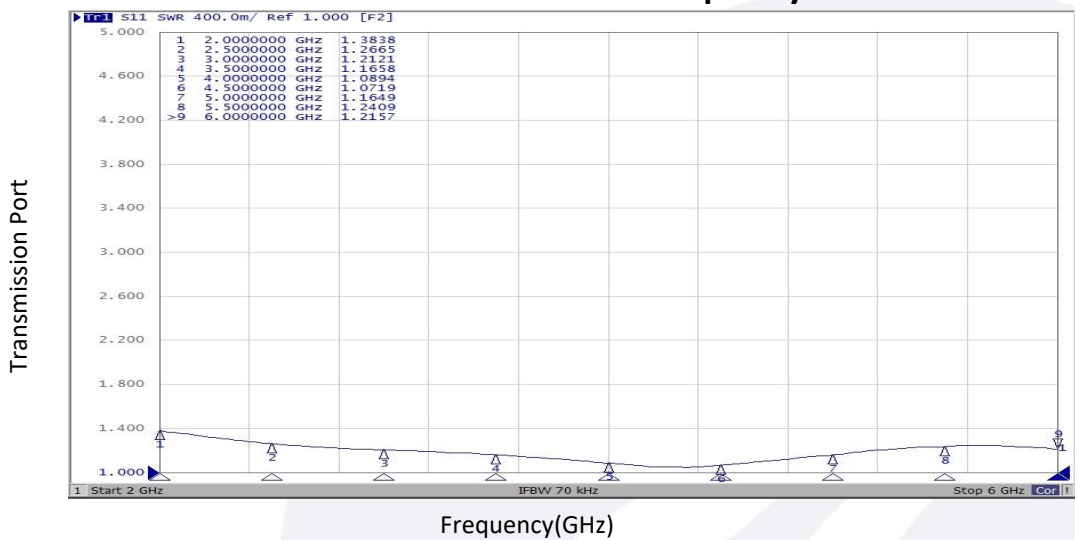


Typical Performance Data:

Coupling Port vs Frequency



Transmission Port vs Frequency



Isolation Port vs Frequency

