

Part No.: TBG-1060-3S-90-SMD

## 90 Degree 3dB Bridge

### Electrical:

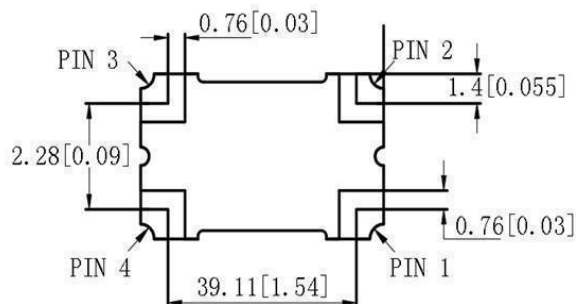
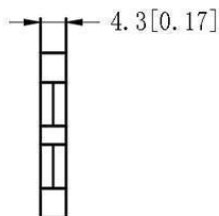
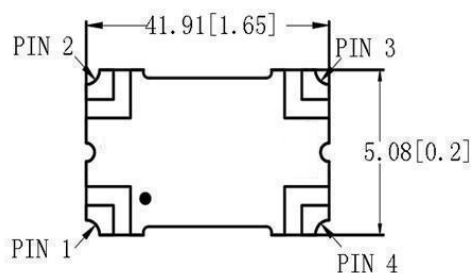
|                    |                     |
|--------------------|---------------------|
| Frequency Range:   | 1000-6000MHz        |
| Coupling :         | 3dB                 |
| Insertion Loss:    | 0.60dB Max          |
| Isolation:         | 18.0dB Min          |
| VSWR:              | 1.30:1 Max          |
| Amplitude Balance: | $\pm 1.1$ dB max    |
| Phase Balance:     | $90 \pm 3.5$ degree |
| Power Handling:    | 100 Watt            |
| Impedance:         | 50 OHMS             |

### Mechanical:

|                    |                  |
|--------------------|------------------|
| Temperature Range: | -55° C - +105° C |
| Size:              | 41.91mm*5.08mm   |
| Thickness:         | 4.3mm            |
| Relative Humidity: | 0 ~ 90%          |

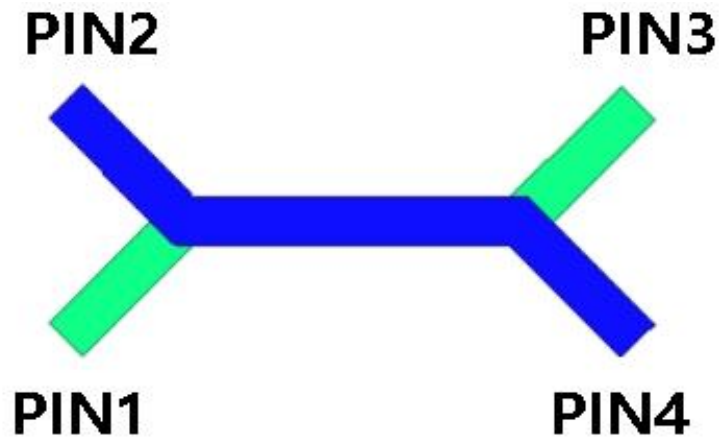
### Outline Drawing:

Unit: mm(Inches)



## Port Configuration Table:

### Hybrid Coupler Pin Configuration



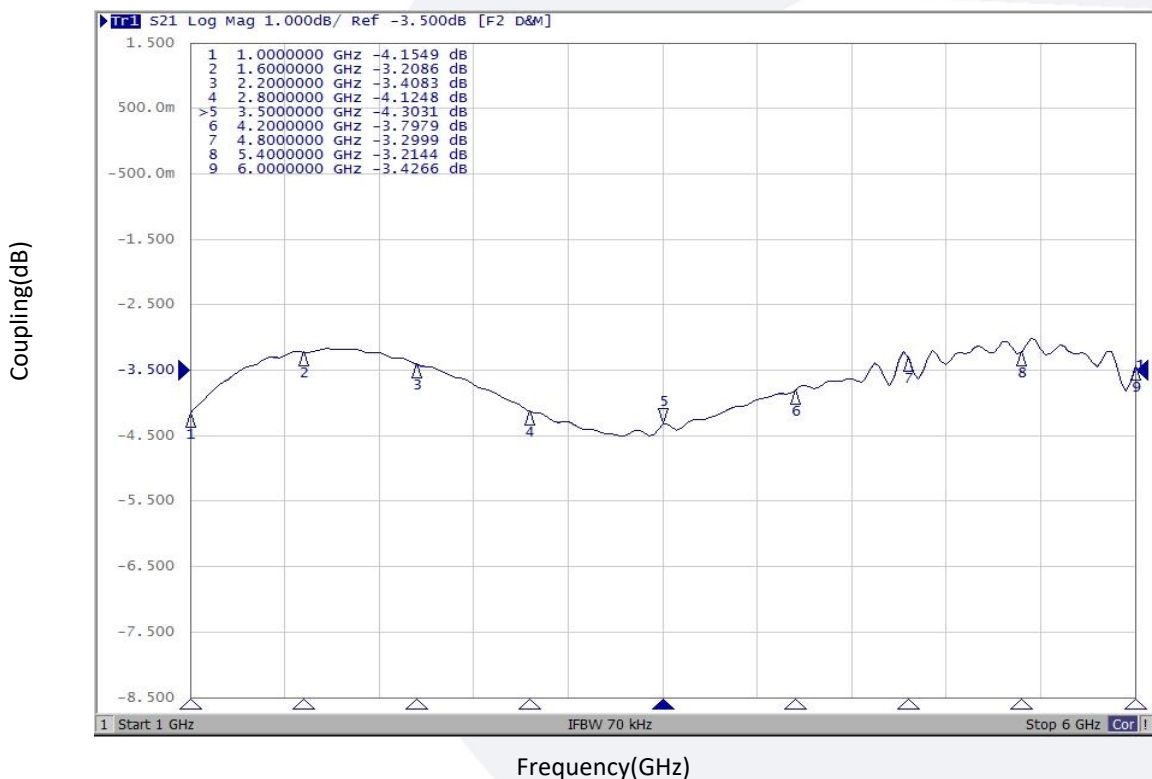
| Configuration | Pin1                              | Pin2                              | Pin3                              | Pin4                              |
|---------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 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   | 1600   | 2200   | 2800   | 3500   | 4200   | 4800   | 5400   | 6000   |
|----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Coupling       | dB           | -4.15  | -3.21  | -3.41  | -4.12  | -4.30  | -3.80  | -3.30  | -3.21  | -3.43  |
| Transmission   | dB           | -2.18  | -2.97  | -2.88  | -2.40  | -2.30  | -2.73  | -3.11  | -3.94  | -3.03  |
| Insertion Loss | dB           | -0.16  | -0.09  | -0.14  | -0.24  | -0.28  | -0.26  | -0.20  | -0.55  | -0.22  |
| Isolation      | dB           | -27.07 | -25.05 | -23.83 | -23.83 | -24.58 | -22.20 | -19.54 | -18.88 | -19.04 |
| Phase          | degree       | 90.57  | 91.65  | 92.13  | 91.57  | 91.15  | 88.52  | 89.91  | 92.62  | 92.45  |
| Return Loss    | Input        | dB     | 1.12   | 1.08   | 1.11   | 1.14   | 1.08   | 1.13   | 1.22   | 1.23   |
|                | Coupler      | dB     | 1.13   | 1.11   | 1.12   | 1.15   | 1.13   | 1.09   | 1.20   | 1.15   |
|                | Transmission | dB     | 1.15   | 1.14   | 1.12   | 1.14   | 1.11   | 1.12   | 1.13   | 1.27   |
|                | Isolated     | dB     | 1.01   | 1.10   | 1.10   | 1.12   | 1.16   | 1.12   | 1.20   | 1.17   |

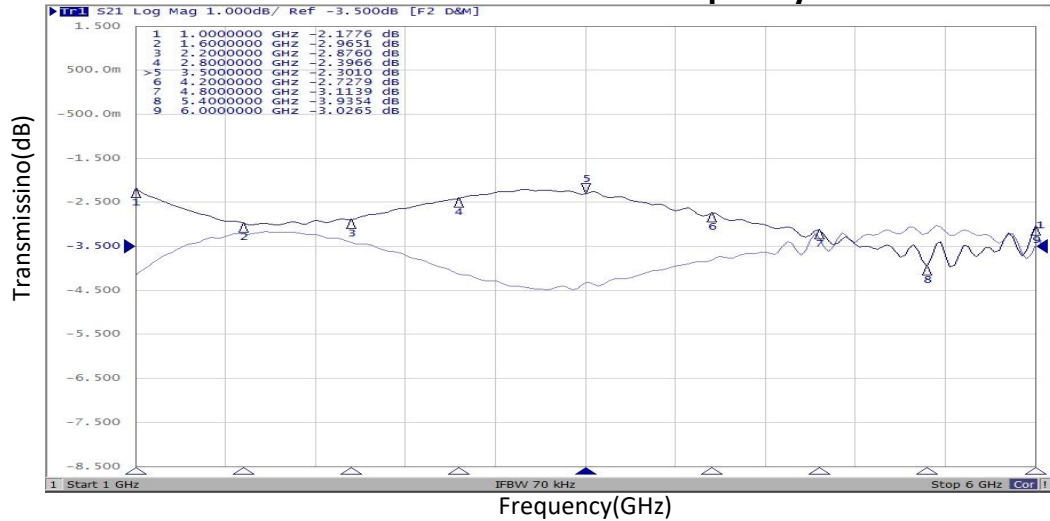
## Typical Performance Data:

### Coupling vs Frequency

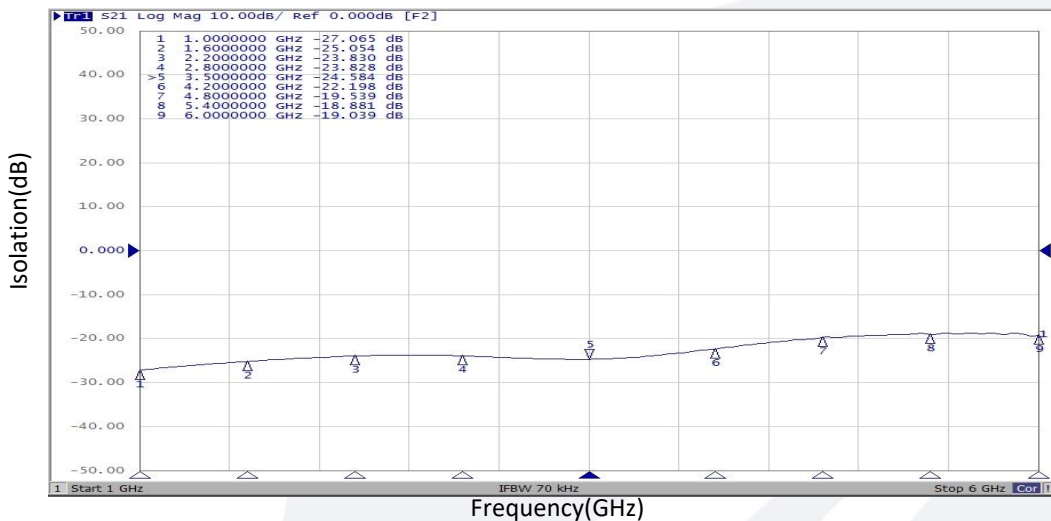


## Typical Performance Data:

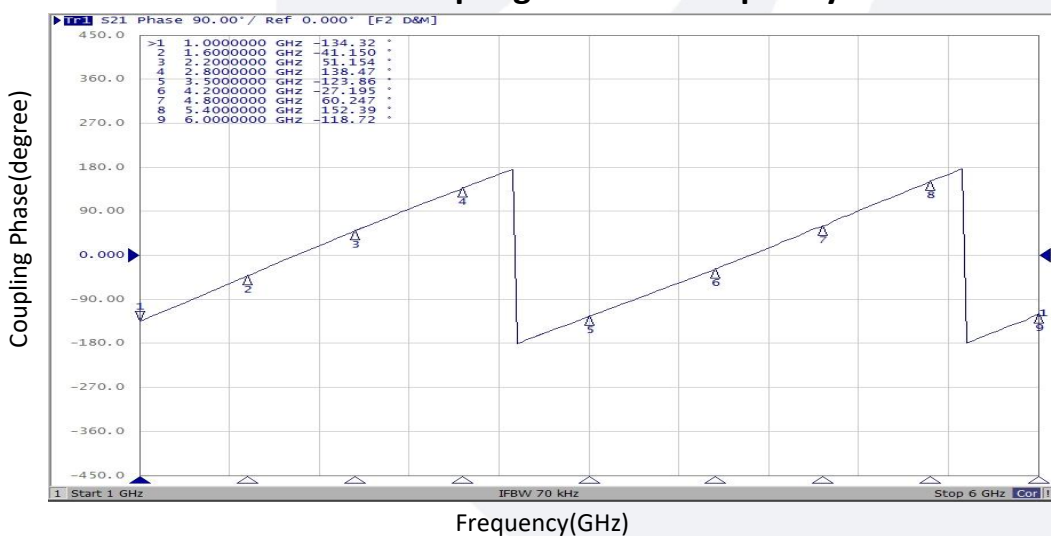
### Transmission vs Frequency



### Isolation vs Frequency

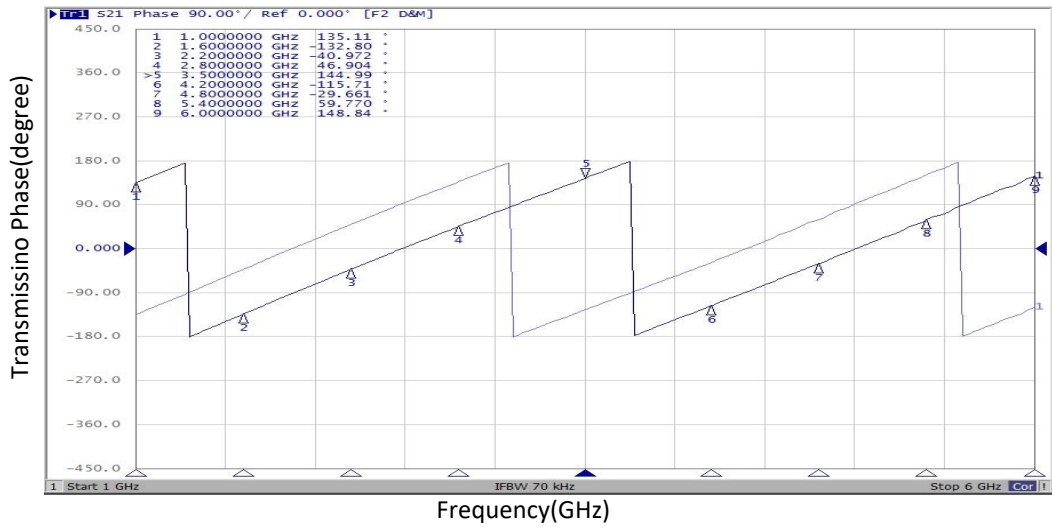


### Coupling Phase vs Frequency

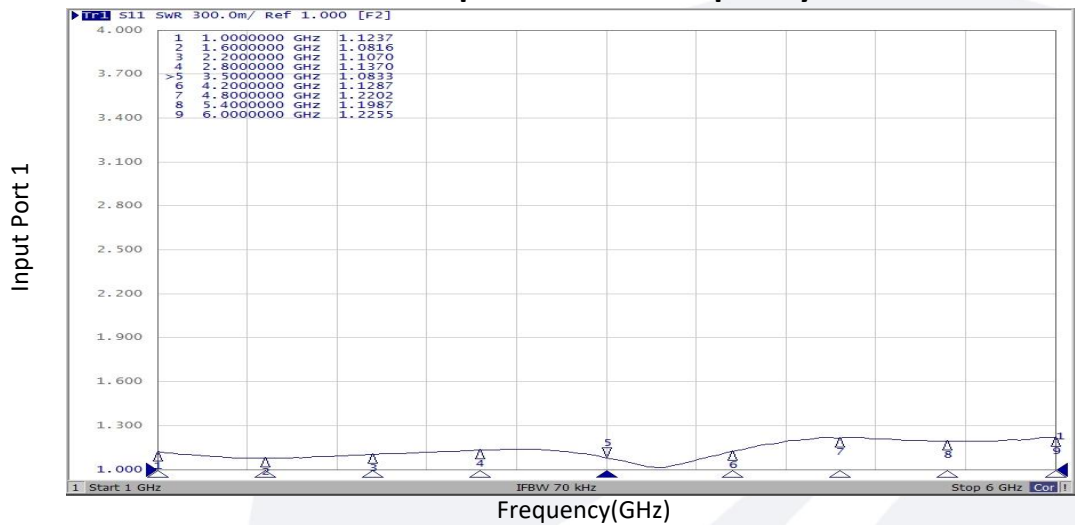


## Typical Performance Data:

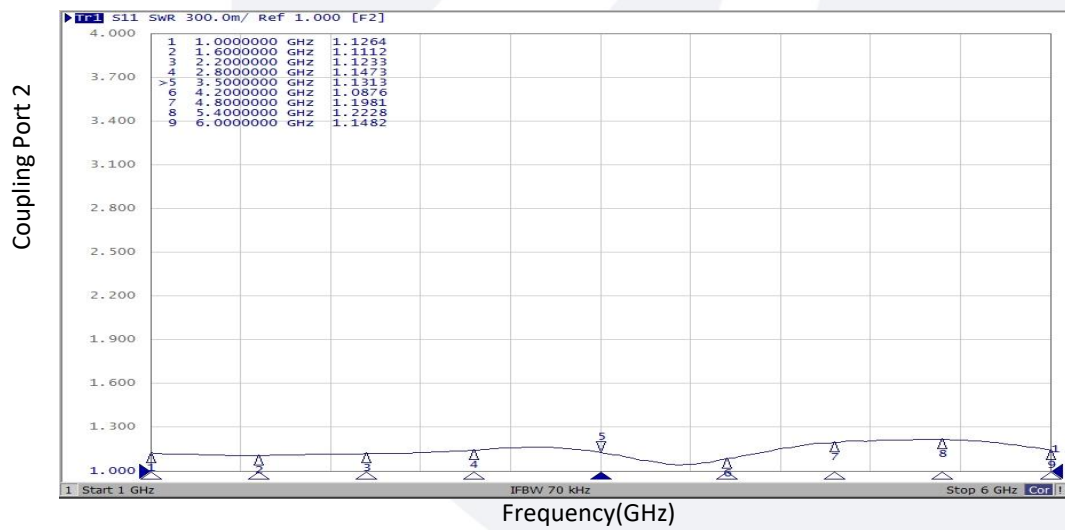
### Transmission Phase vs Frequency



### Input Port 1 vs Frequency

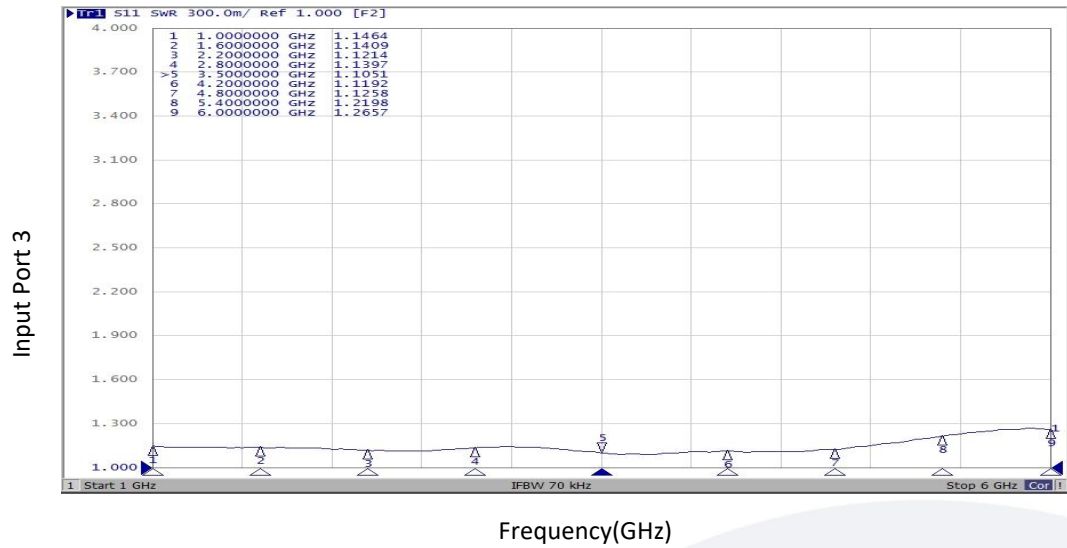


### Input Port 2 vs Frequency



## Typical Performance Data:

### Input Port 3vs Frequency



### Input Port 4vs Frequency

