

## 6.0-18.0GHz Wirebond Quadrature Hybrid Coupler

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### FPC10293 Datasheet

#### DESCRIPTION

DLI's wirebond 3dB Quadrature Hybrid Coupler offers good phase and amplitude balance in a small size with low loss and good isolation. The catalog 3 dB Hybrids are offered in a variety of frequency bands, which offers a drop-in solution with highly repeatable performance.

#### FEATURES

- Small Size
- Wirebond Package
- 90 Degree phase delta between output ports
- Moisture Sensitivity Level: MSL1
- Frequency Stable over Temperature
- Operating & Storage Temp: -55°C to +125°C
- Characteristic Impedance: 50Ω

#### Packaging and Ordering Information

For packaging in tape and reel please use part number: FHC10293-T



#### SPECIFICATIONS\*

Parameter	Frequency Range (GHz)	Min	Typ	Max
Insertion Loss (dB)	6.0 - 18.0		0.6	1.0
Return Loss (dB)			15	
Isolation (dB)			15	
Amplitude Balance (dB)			±1	
90 Degree Phase Balance			±3.0	
CW Input Power** (W)			50	
Size (L x W x H)	0.350 x 0.250 x 0.010 in 8.89 x 6.35 x 0.25 mm			

\*Electrical specifications based on typical mounted performance at room temperature. Insertion loss shall vary ±0.5dB over temperature.

\*\* Power rating assumes the component will be mounted to a PCB with good thermally conducting ground vias as outlined in the recommended PCB layout that are connected to an adequate heat sink. Max power is based on 125°C base temperature.

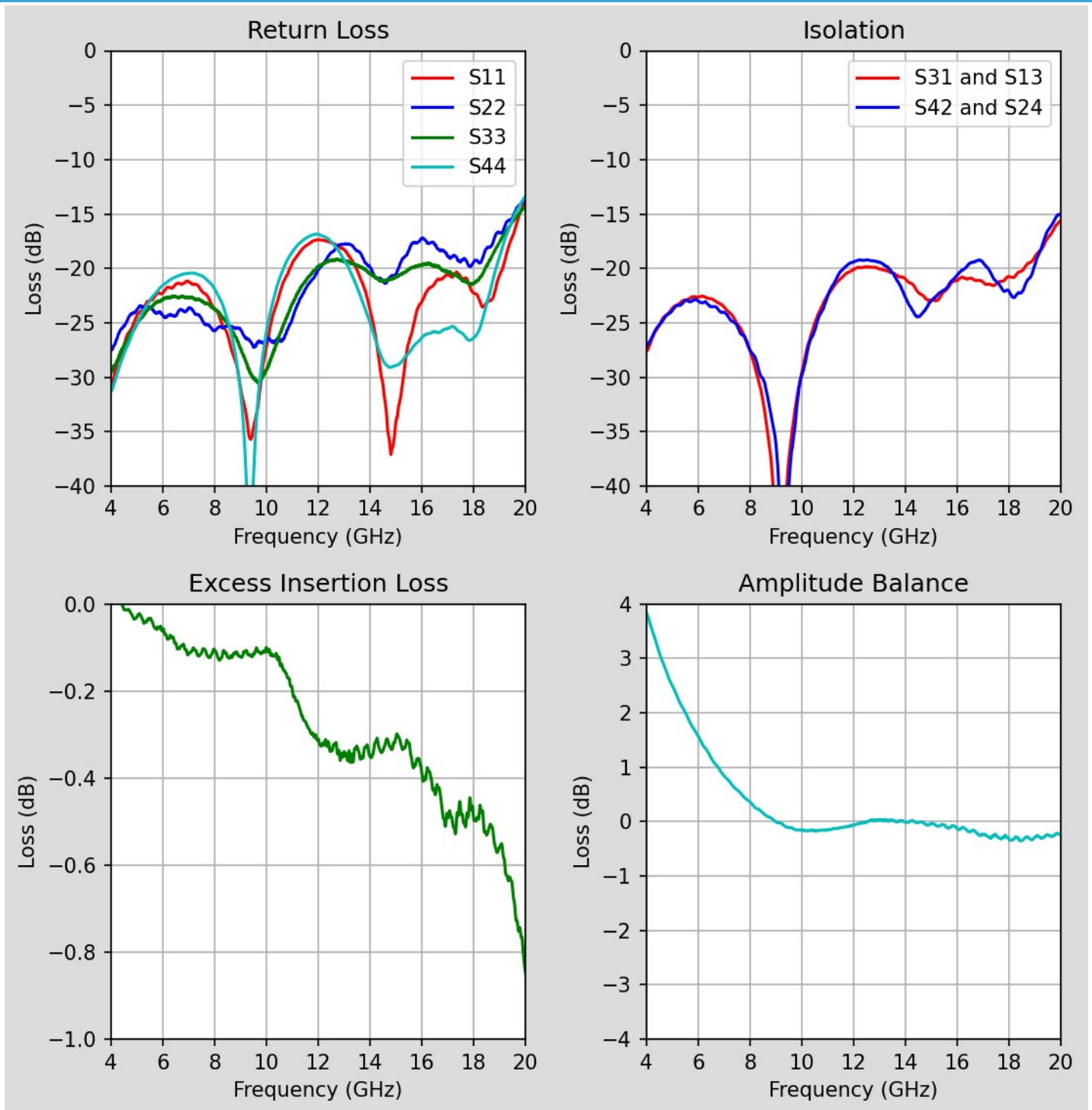
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To Order Contact [KCCSales@knowles.com](mailto:KCCSales@knowles.com) | For Technical Inquiries Contact [DLIengineering@knowles.com](mailto:DLIengineering@knowles.com)

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**FPC10293 Datasheet Typical Measured Performance**



\*Typical de-embedded measured performance mounted on a connectorized test fixture. Evaluation Board is 0.010in RO4350B with 50.0 Ohm CPW ground traces going into the ports at room temperature.

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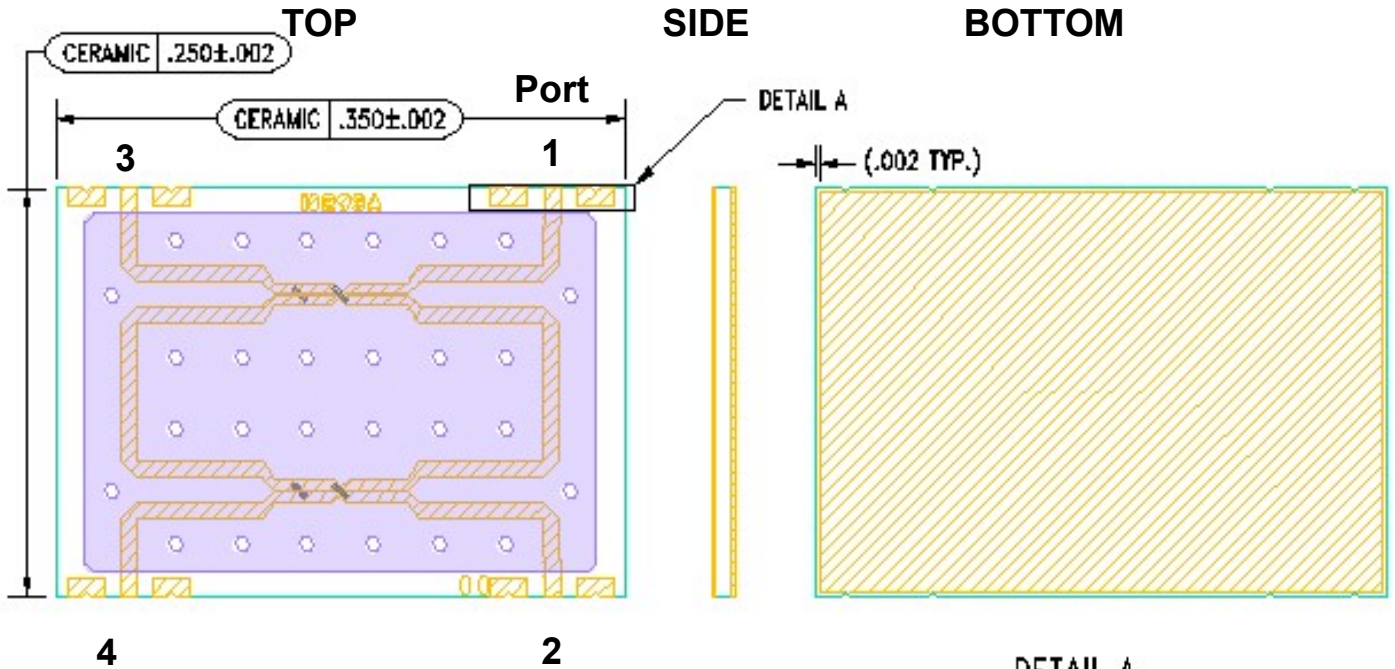
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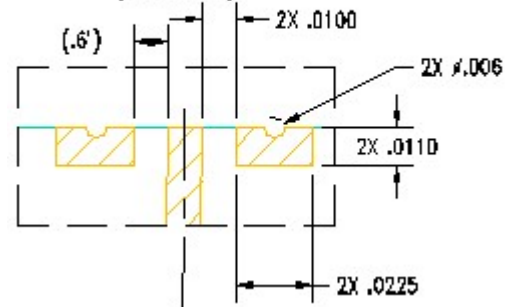
**Physical Dimensions**

Units = inches



**DETAIL A**

(4 PLACES)



**FHC10293 Coupler Port Configuration**

	Port 1	Port 2	Port 3	Port 4
<b>Configuration 1</b>	Input	Output	Isolated	Coupled
<b>Configuration 2</b>	Output	Input	Coupled	Isolated
<b>Configuration 3</b>	Isolated	Coupled	Input	Output
<b>Configuration 4</b>	Coupled	Isolated	Output	Input

Termination Finish: Au

Maximum Assembly Process Temperature: 250°C

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