

## 2 to 18GHz 20dB Directional Coupler FPC07237

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### DESCRIPTION

DLI brand directional couplers utilize DLI's high dielectric ceramic materials to deliver small size and minimal performance variation over temperature.

### FEATURES

- Small Size
- Wire bond configuration
- Moisture Sensitivity Level: MSL1
- Frequency Stable over Temperature
- Excellent Repeatability
- Operating & Storage Temp: -55°C to +125°C
- Characteristic Impedance: 50Ω
- Referenced surface mount version is FPC07180

**Packaging and Ordering Information:**  
To request Tape and Reel packaging, please order part number FPC07237-T

### SPECIFICATIONS\*

Parameter	Frequency Range (GHz)	Min	Max
Passband Insertion Loss* (dB)	2 - 18		0.8
Min Passband Return Loss (dB)		15	
Coupling (dB)		20	+/- 1.5
Directivity (dB)		10	
CW Input Power** (W)			10
$\theta_{JC} \left( \frac{^{\circ}\text{C}}{\text{W}} \right)$	7.5		
Size (L x W x H)	0.500 x 0.150 x 0.015 in 12.7 x 3.81 x 0.38 mm		

\*Electrical specifications based on typical mounted performance at room temperature. Insertion loss shall vary  $\pm 0.5\text{dB}$  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 85°C base temperature.



Information in this document is for informational and guideline purposes only. All information regarding the Product described in this datasheet is subject to change from time to time at Knowles Precision Devices' sole discretion. It is the customer's sole responsibility to evaluate the suitability of the Product in the customer's particular application. Knowles Precision Devices assumes no responsibility or liability for the use of the information contained within.

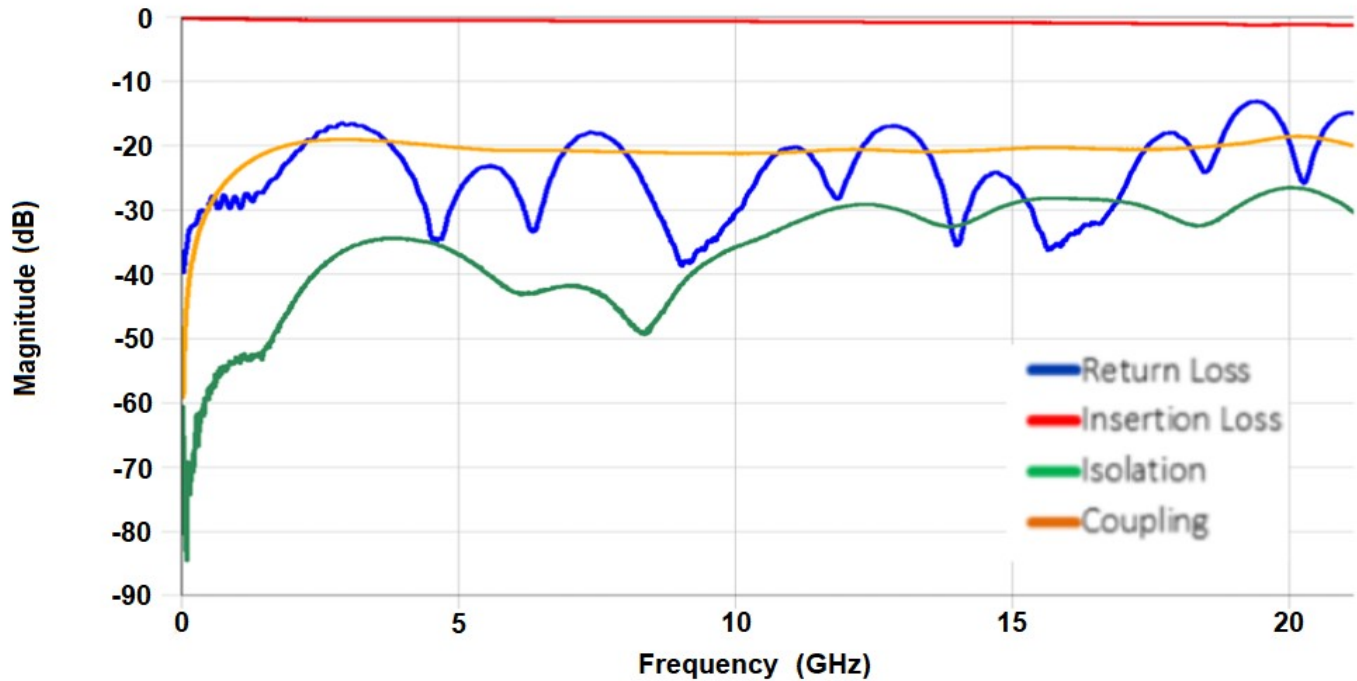
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To Order Contact [KCCSales@knowles.com](mailto:KCCSales@knowles.com) | For Technical Inquiries Contact [DLIengineering@knowles.com](mailto:DLIengineering@knowles.com)

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**Typical Measured Performance\***



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

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March 2025

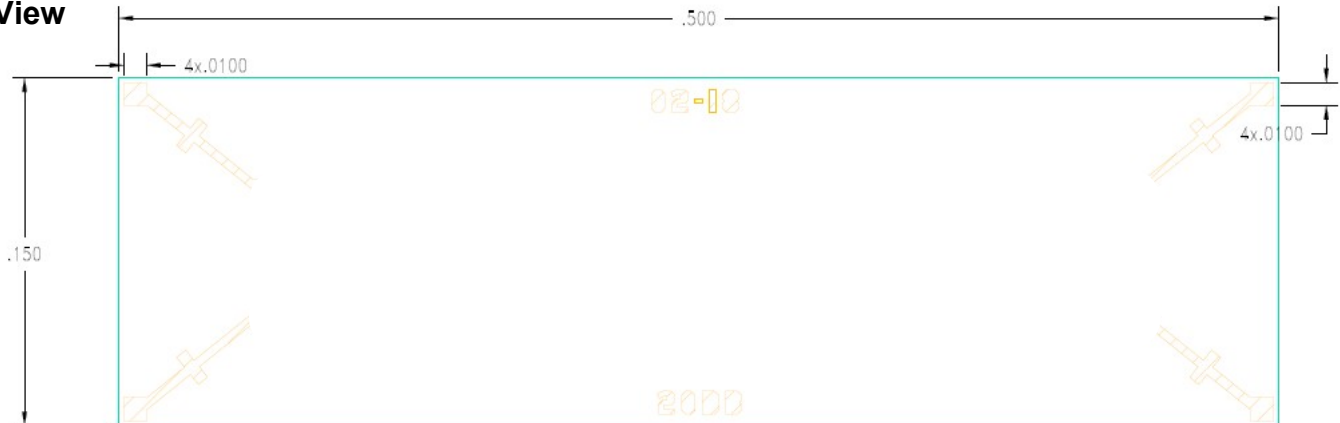
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## Physical Dimensions

Units = mils

### Top View



### Side View



### Bottom View



**FPC07237 Coupler Port Configuration**

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

### Notes :

1. Termination Finish: Gold
2. Maximum Assembly Process Temperature: 250°C

### Tolerances:

For values with 3 decimal places  $\pm 1.0$

For values with 4 decimal places  $\pm 0.5$

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