

## 0.6 - 2GHz 2-way Power Divider

### PDW12155 PRELIMINARY

[www.knowlesc capacitors.com](http://www.knowlesc capacitors.com)

#### DESCRIPTION

DLI's 0.6-2 GHz 2-way power divider / combiner offers unmatched size and performance in a surface mount configuration. This power divider utilizes Knowles Quasi Lumped technology to offer small size and excellent repeatability

#### FEATURES

- Small Size
- Solder Surface Mount Package
- Excellent Repeatability
- Moisture Sensitivity Level: MSL1
- Operating & Storage Temp: -55°C to +125°C
- Characteristic Impedance: 50Ω

#### Packaging and Ordering Information:

To request tape and reel packaging, please order part number PDW12155-T

#### SPECIFICATIONS\*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Nominal Power Splitting (dB)	0.6 - 2		3	
Nominal Phase Shift (Deg)	0.6 - 2		0	
Excess Insertion Loss (dB)	0.6 - 2		0.8	1.2
Return Loss (dB)	0.6 - 2	12	17	
Amplitude Balance (dB)	0.6 - 2		0.1	0.3
Phase Balance (Deg)	0.6 - 2		2	5
Isolation (dB)	0.6 - 2	14	20	
Max CW Input Power** as Divider (W)	0.6 - 2			10
Max CW Input Power** as Combiner (W)	0.6 - 2			5 ***



\*Electrical specifications based on typical mounted performance at room temperature. Insertion loss shall vary  $\pm 0.5$ 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.

\*\*\*Power rating as a combiner assumes that the incoming signals are of equal amplitude and phase.

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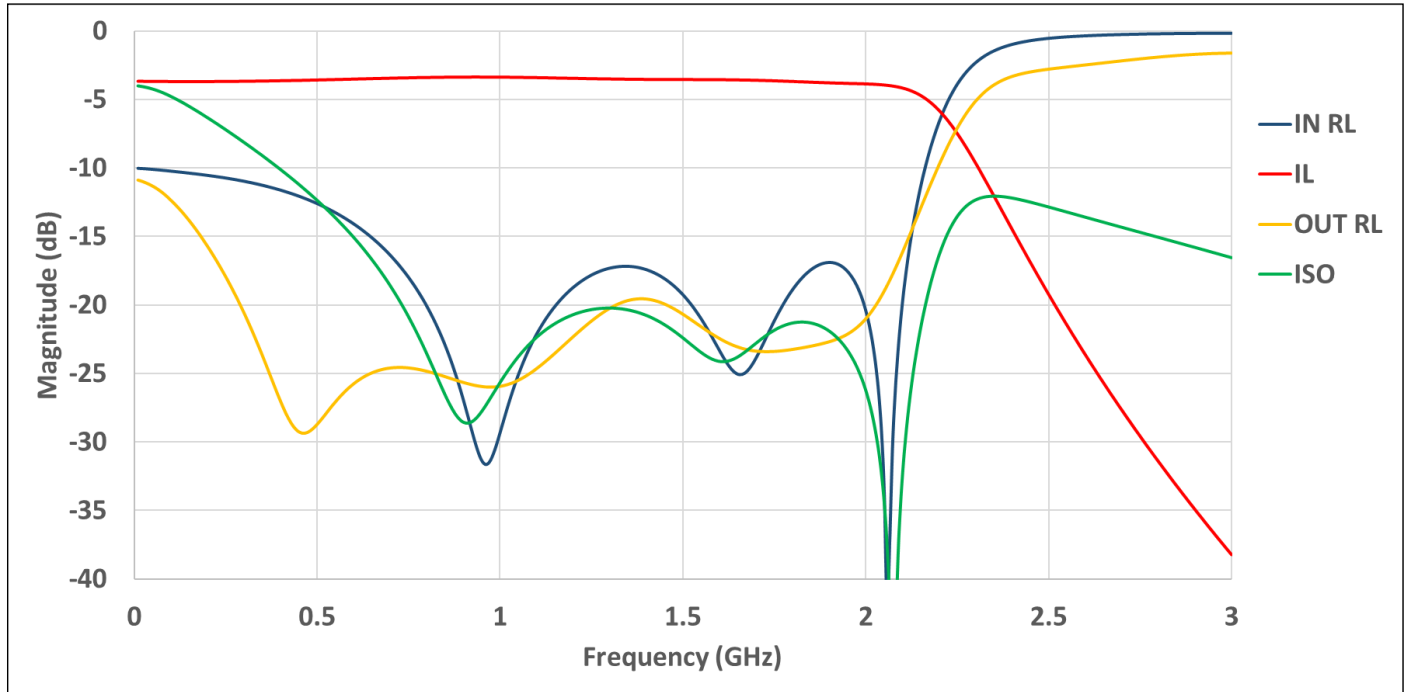
To Order Contact [KCCSales@knowles.com](mailto:KCCSales@knowles.com) | For Technical Inquiries Contact [DLengineering@knowles.com](mailto:DLengineering@knowles.com)

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#### Preliminary Simulated Performance



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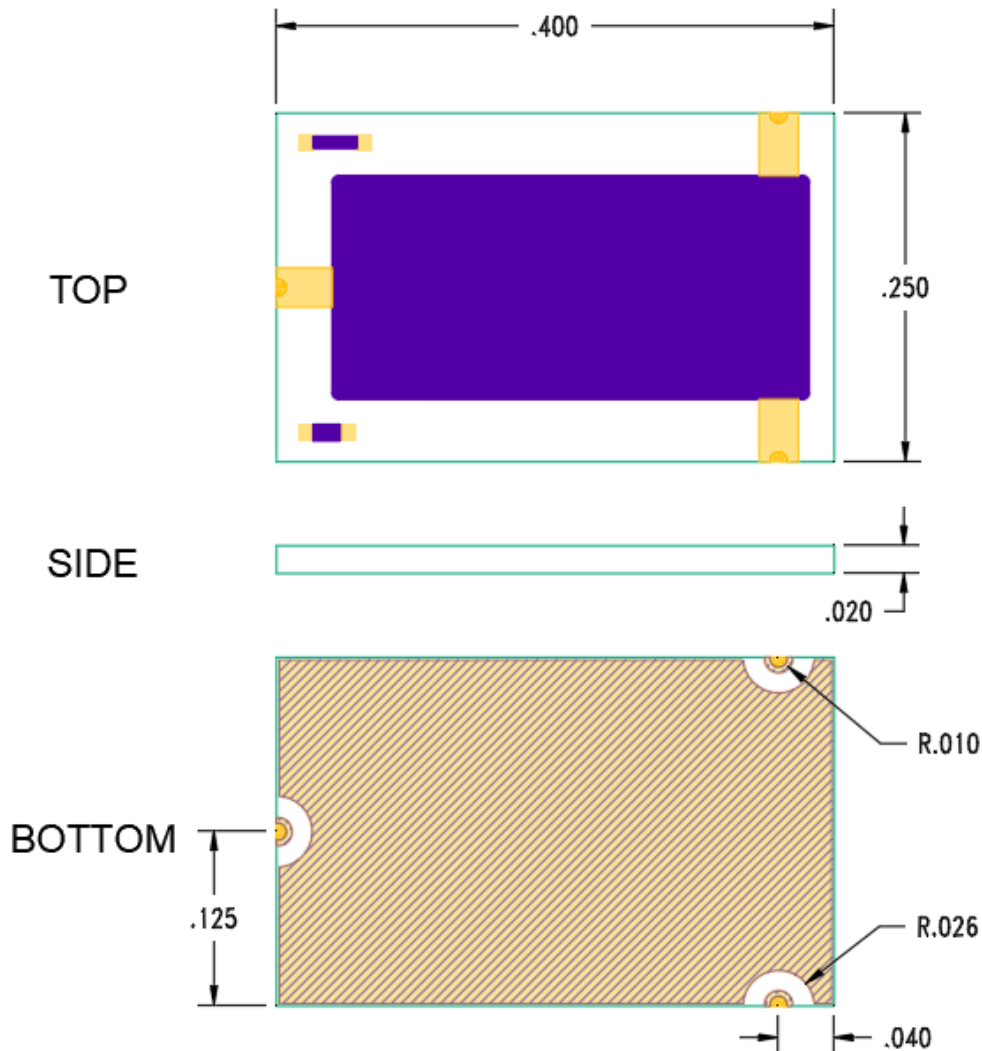
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### Physical Dimensions

Units = Inches



#### Notes :

##### 1. Mounting Surface Metallization:

ENIG: 3 - 6  $\mu$ inch Au over 50  $\mu$ inch Ni

##### 2. Maximum Assembly Process Temperature: 250°C

#### Tolerances:

For values with 3 decimal places  $\pm 0.001$

For values with 4 decimal places  $\pm 0.0005$

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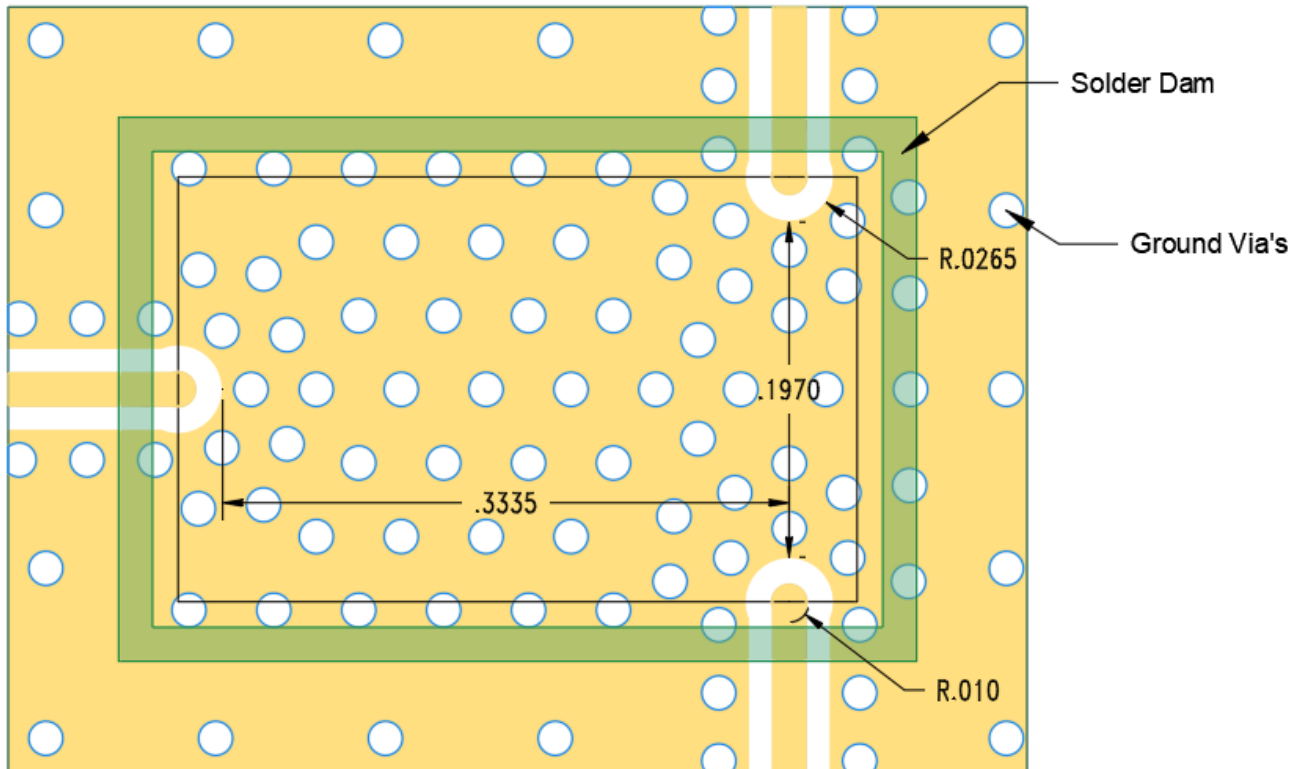
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#### Recommended PCB Layout



Units = Inches

#### Note :

Parameters of the Recommended PCB:

- 0.010 inch Rogers Board RO4350B
- 3.66 dK, Board Material design
- Dimensions of 50.0 Ohm CPWG :
  - . 0.020 inch RF trace width

For further details and best practices, reference the **Microwave Products Guide**, available at:  
<https://www.knowlescapacitors.com/Support/Catalogs>

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September 2025