DIELECTRIC LABORATORIES
a Knowles Precision Devices brand

knowles PRECISION DEVICES

www.knowlescapacitors.com

0.3 - 1GHz 2-way Power Divider

PDW12154 PRELIMINARY

DESCRIPTION

DLI's 0.3-1 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 PDW12154-T

SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Nominal Power Splitting (dB)	0.3 - 1		3	
Nominal Phase Shift (Deg)	0.3 - 1		0	
Excess Insertion Loss (dB)	0.3 - 1		1	1.2
Return Loss (dB)	0.3 - 1	12	14	
Amplitude Balance (dB)	0.3 - 1		0.1	0.3
Phase Balance (Deg)	0.3 - 1		2	5
Isolation (dB)	0.3 - 1	12	14	
Max CW Input Power** as Divider (W)	0.3 - 1			10
Max CW Input Power** as Combiner (W)	0.3 - 1			5 ***

Certified System ISO 9001 QMI-SAI Global

Certified System AS 9100 QMI-SAI Global

RoHS 2011/65/EU Lead Free

*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 85°C base temperature.

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

2777 Route 20 East, Cazenovia, NY 13035| Phone: (315)655-8710

To Order Contact KCCSales@knowles.com | For Technical Inquiries Contact DLIengineering@knowles.com

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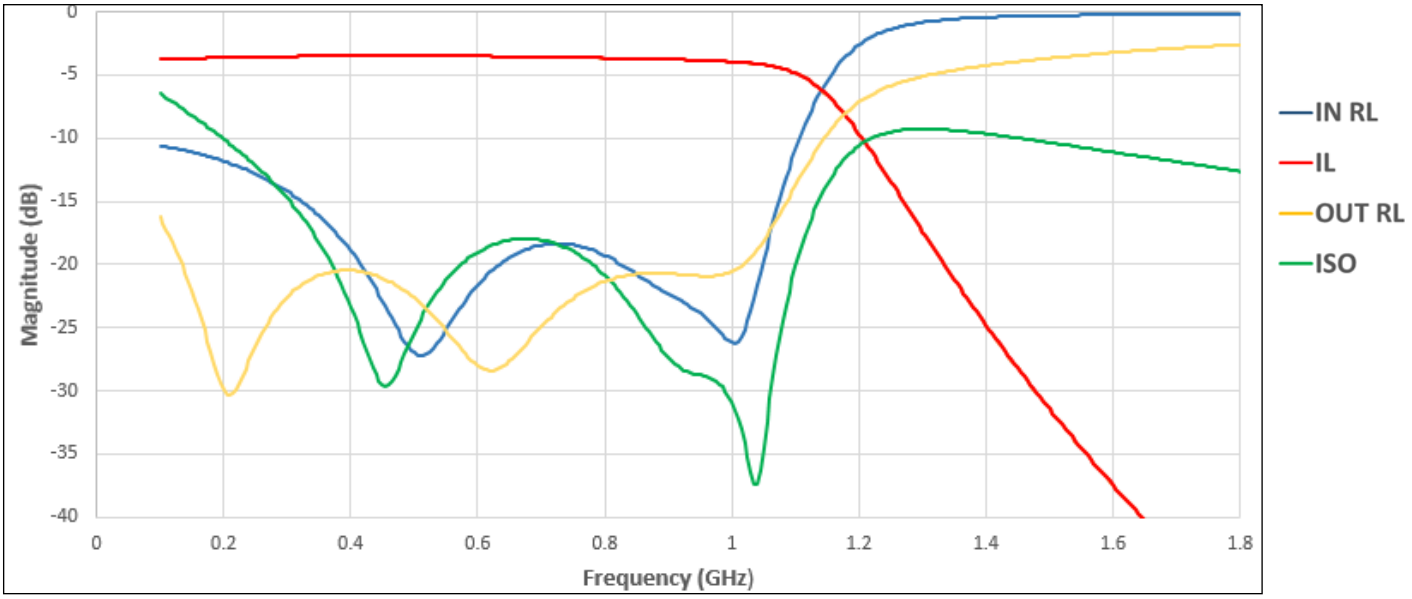
Preliminary Simulated Performance



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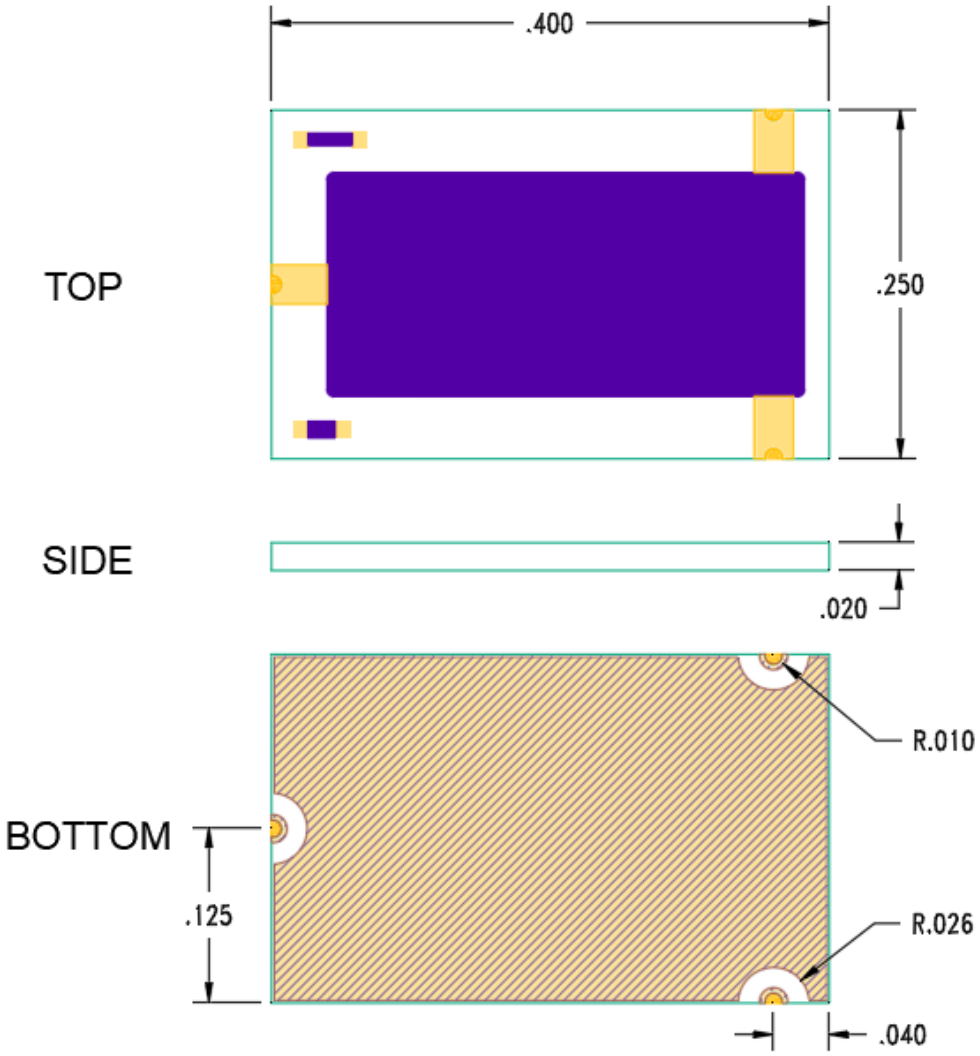
Physical Dimensions

Units = Inches



Notes :

1. Mounting Surface Metallization:

   ENIG: 3 - 6 µinch Au over 50 µinch Ni

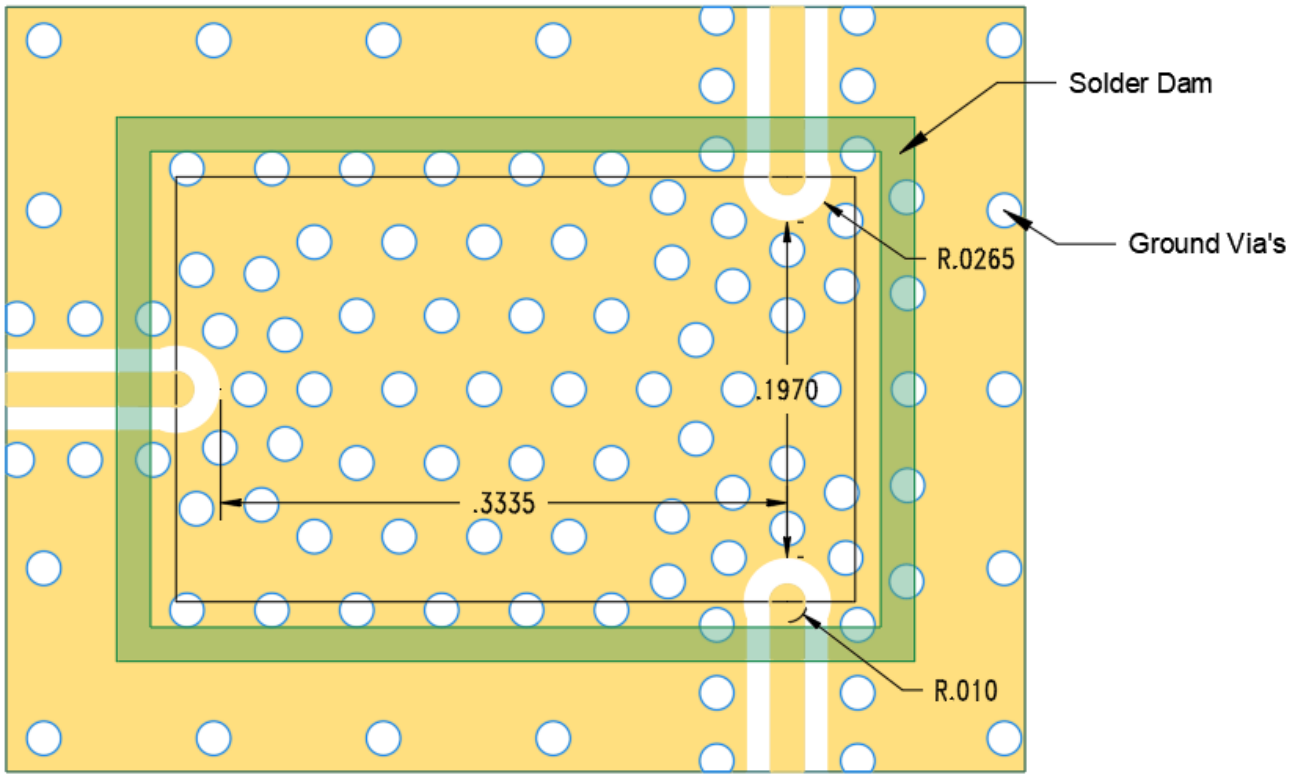
2. Maximum Assembly Process Temperature: 250°C

Tolerances:

For values with 3 decimal places ±0.001

For values with 4 decimal places ±0.0005

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