

8 - 50GHz 2-way Wilkinson Power Divider

PDW09692

www.knowlescapacitors.com

DESCRIPTION

DLI's 8-50 GHz 2-way power divider / combiner offers unmatched size and performance in a surface mount configuration. This power divider utilizes DLI's low loss temperature stable materials which offer small size and minimal performance variation over temperature.

Packaging and Ordering Information:

To request tape and reel packaging, please order part number PDW09692-T

FEATURES

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



SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Nominal Power Splitting (dB)	8 - 50		3	
Nominal Phase Shift (Deg)	8 - 50		0	
Excess Insertion Loss (dB)	8 - 30		0.5	1
	30 - 50		1.5	2.5
Return Loss (dB)	8 - 50	12	17	
Amplitude Balance (dB)	8 - 30		0.1	0.2
	30 - 50		0.4	0.7
Phase Balance (Deg)	8 - 30		2	5
	30 - 50		8	10
Isolation (dB)	8 - 30	15	20	
Max CW Input Power as Divider (W)**	8 - 50			10
Max CW Input Power as Combiner (W)**	8 - 50			5 ***

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

**Power rating assumes the component will be mounted to a PCB with good thermally conducting ground via's 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.

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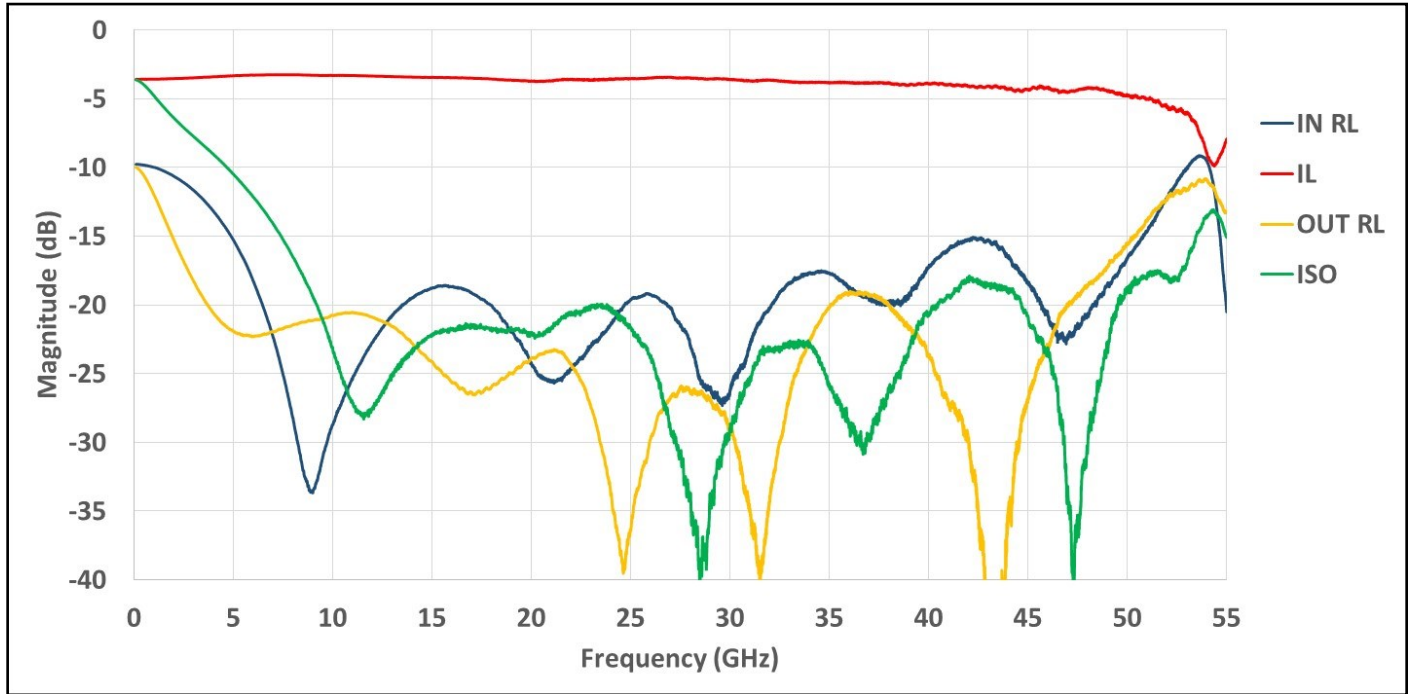
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Typical Measured Performance



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

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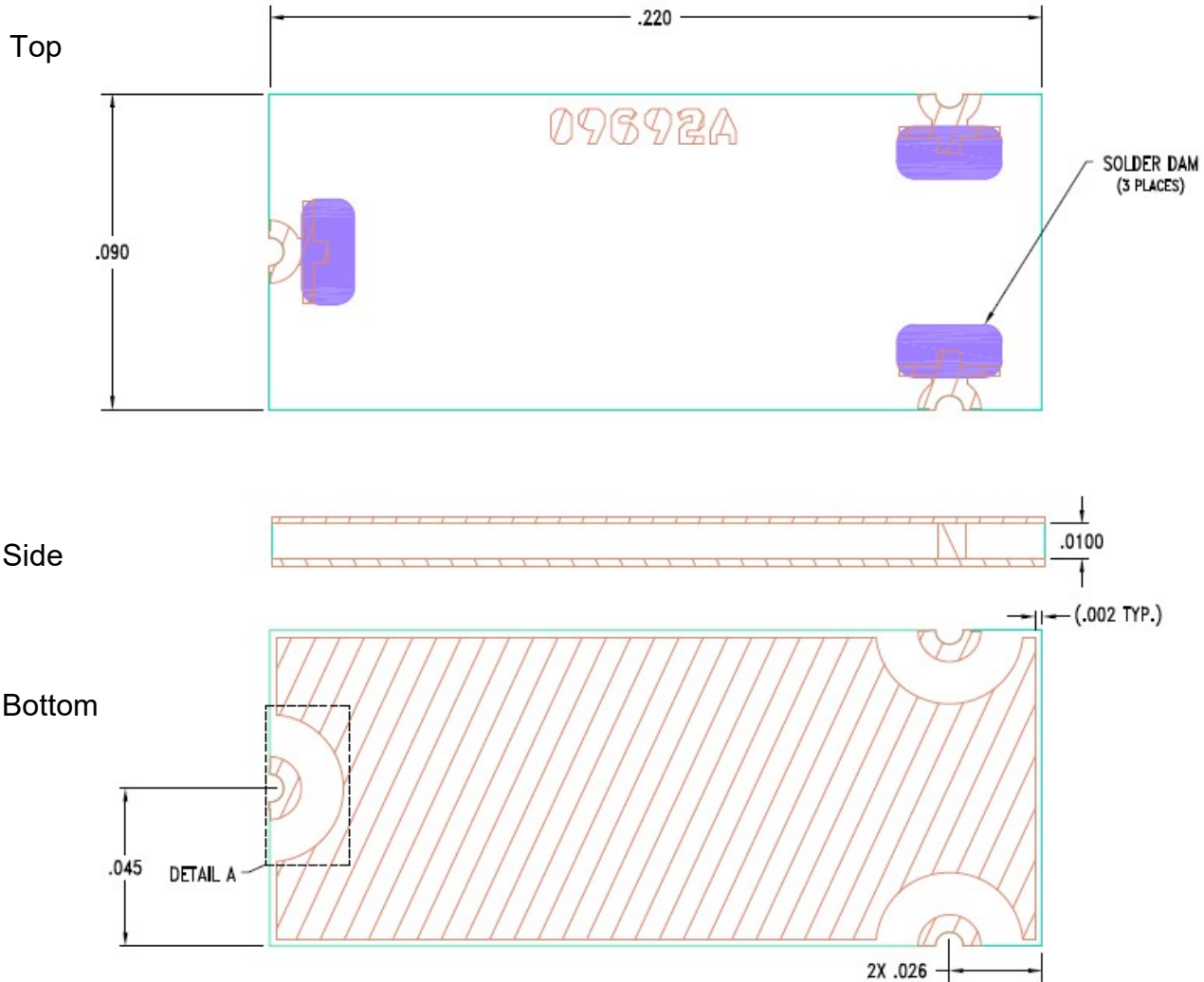
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Physical Dimensions

Units = Inches



Notes :

1. Mounting Surface Metallization:

ENIG: 3 - 6 μinch Au over 50 μinch Ni

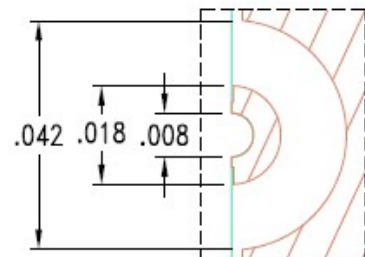
2. Maximum Assembly Process Temperature: 250°C

Tolerances:

For values with 3 decimal places ±0.001

For values with 4 decimal places ±0.0005

DETAIL A
(3 PLACES)



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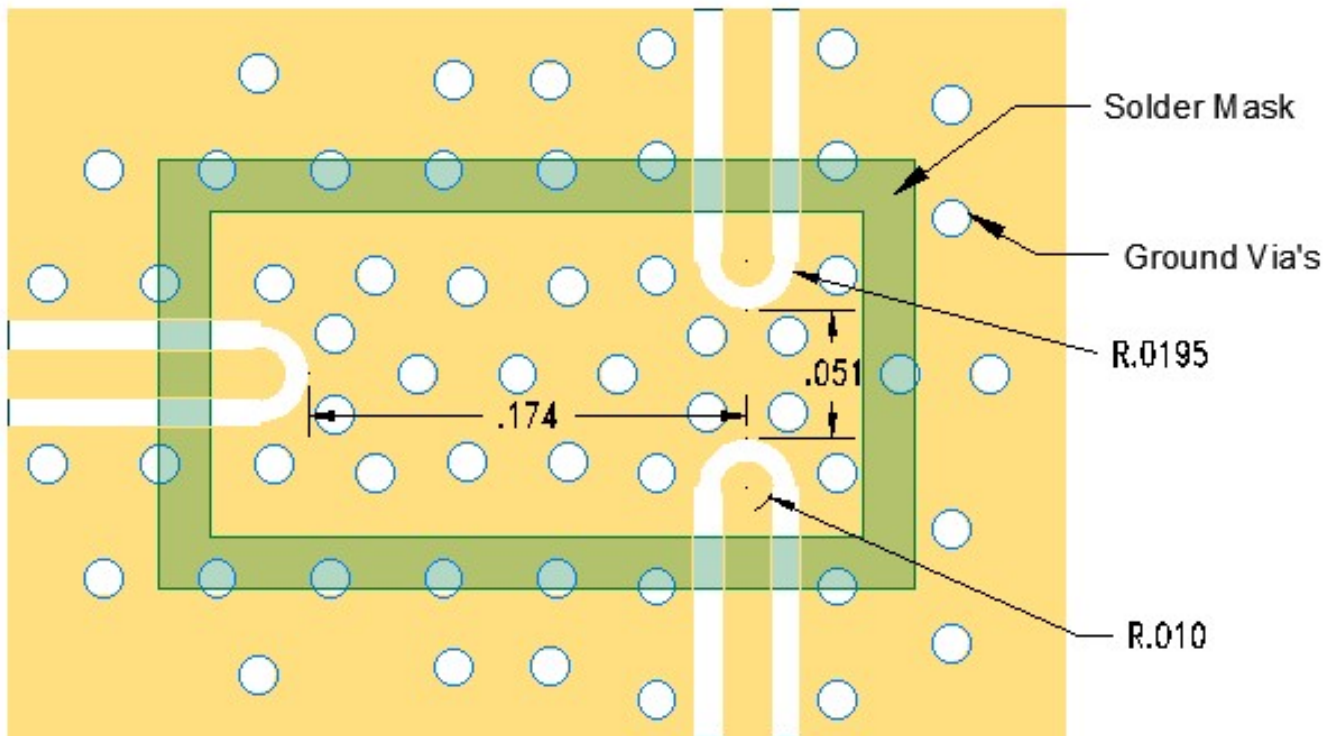
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Recommended PCB Layout



Note :

Units = Inches

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
 - . 0.015 inch spacing

For more information on how to mount this SMD part, refer to the SMD Guide, available in the Thin Film section of <https://www.knowlescapacitors.com/Support/Resources>

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