6 - 18GHz 4-way Wilkinson Power Divider
PDW06089

www.knowlescapacitors.com

DESCRIPTION

DLI's 6-18 GHz 4-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.

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

Packaging and Ordering Information:

To request tape and reel packaging, please order part number PDW06089-T, see page 5.

SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Nominal Power Splitting (dB)	6 - 18		6.0	
Nominal Phase Shift (Deg)			0.0	
Excess Insertion Loss (dB)				1
Return Loss (dB)		14		
Amplitude Balance (dB)				± 0.5
Phase Balance (Deg)				± 3.0
Isolation (dB)		14		
Max CW Input Power** as Divider (W)				6
Max CW Input Power** as Combiner (W)				1.8 ***
Size (L x W x H)	0.300 x 0.250 x 0.020 in. 7.62 x 6.35 x 0.508 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 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.

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

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

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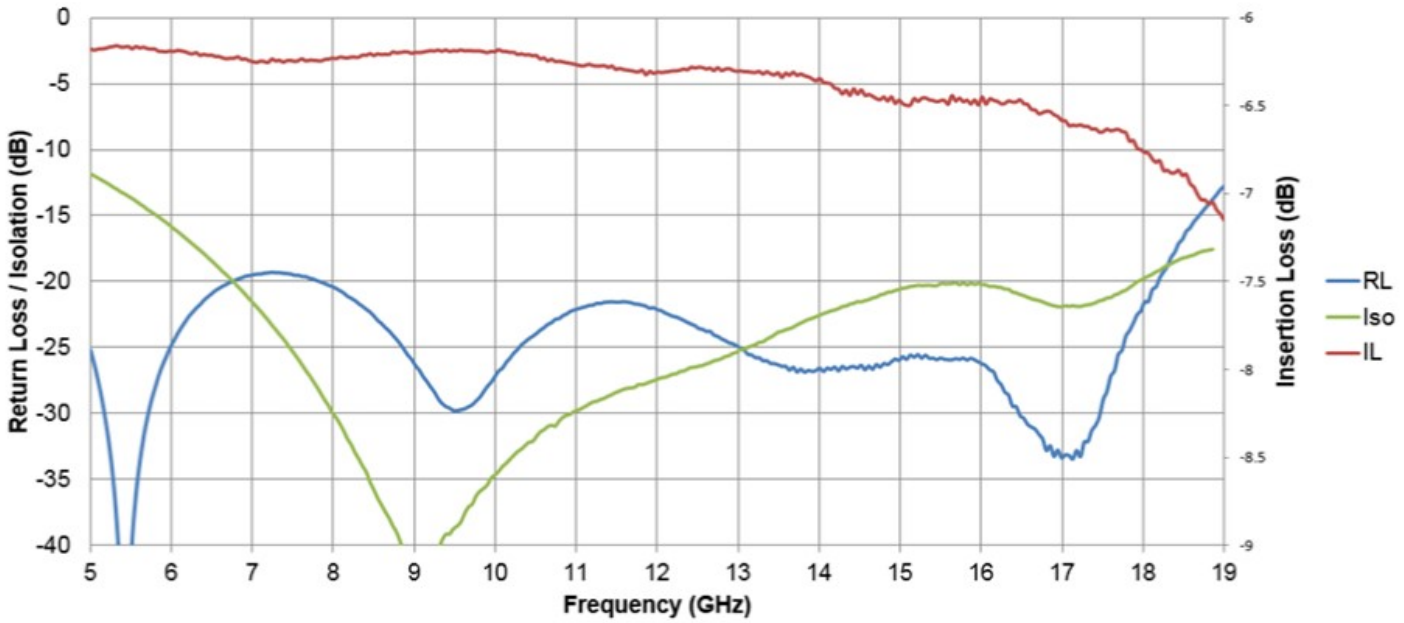
Typical Measured Performance



*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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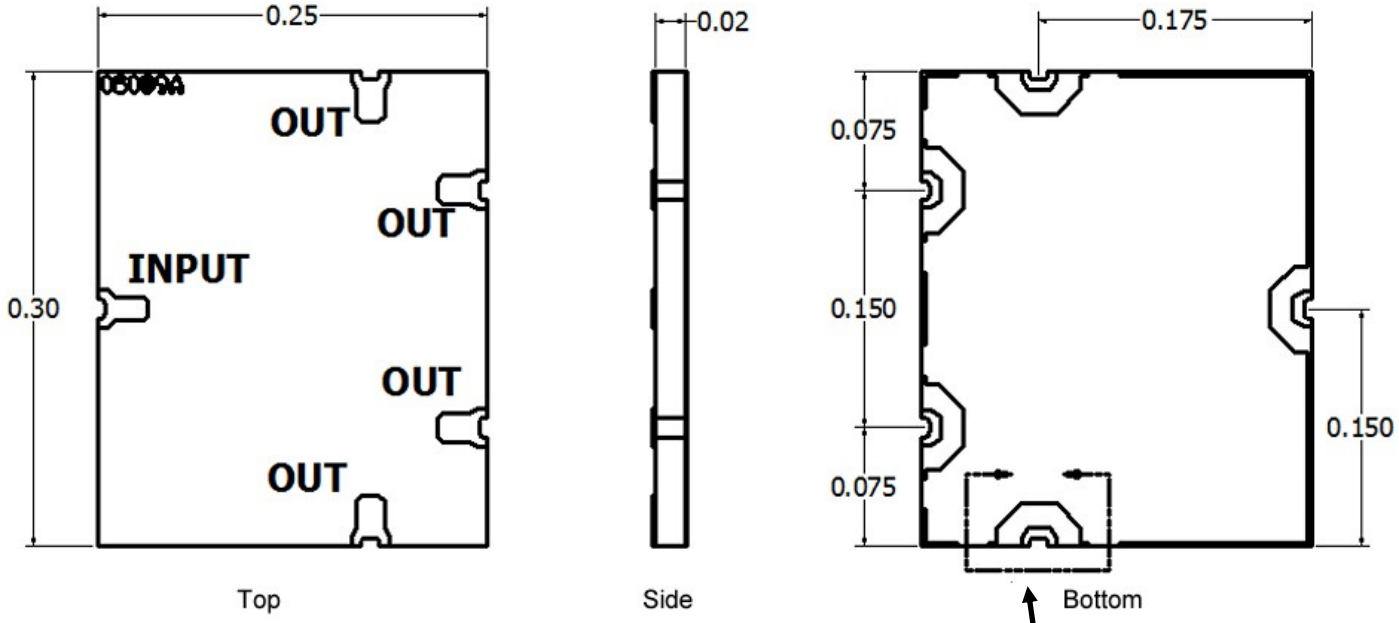
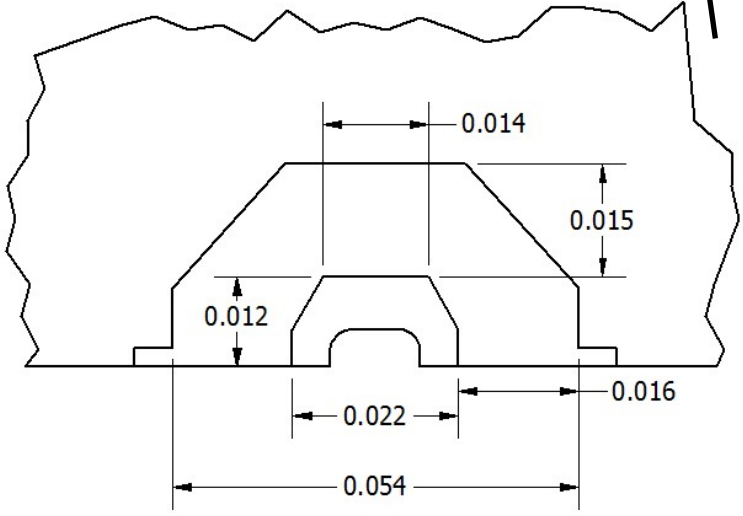
Physical Dimensions

Units = Inches



Detail View of I/O



Notes :

1. Termination Finish:

   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

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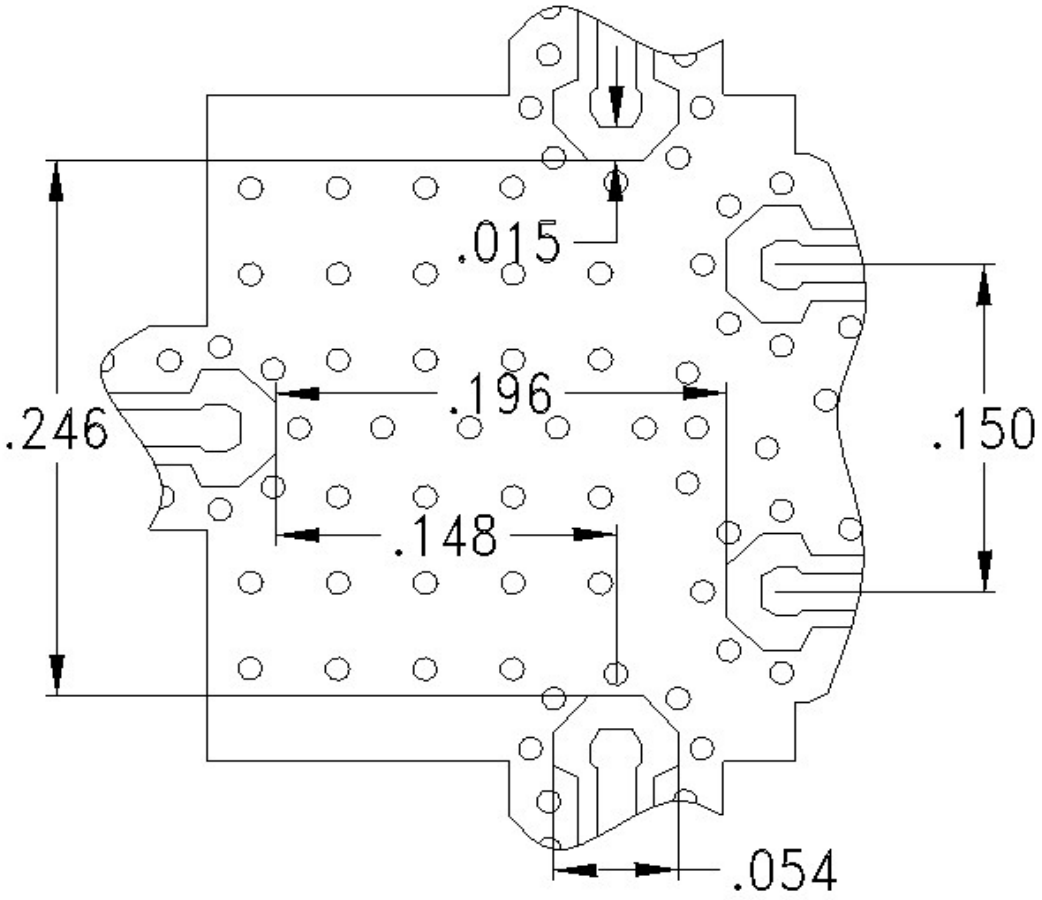
Recommended PCB Layout



Note :

Units = Inches

- 50Ω trace dimensions are application specific.
- Ensure adequate grounding beneath the part.

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

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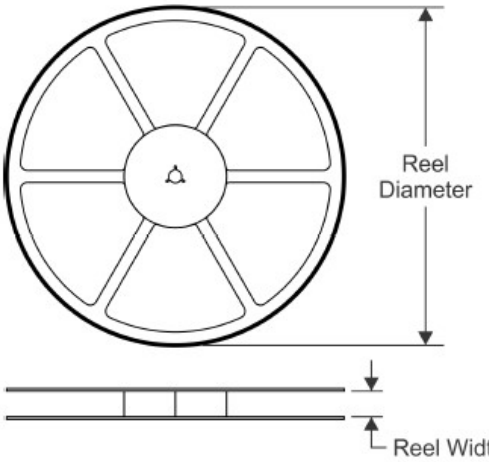
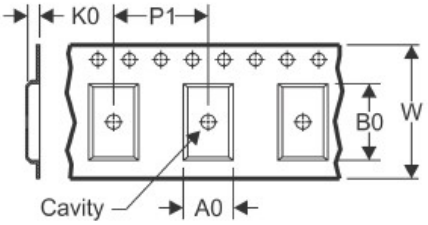
TAPE AND REEL INFORMATION

REEL DIMENSIONS

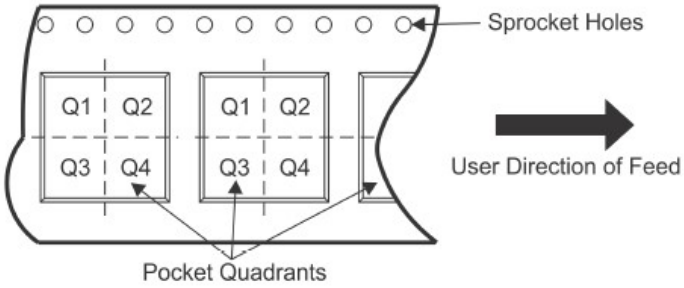


TAPE DIMENSIONS



A0	Dimension designed to accommodate the component width
B0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
PDW06089-T	SMD		5	500	180.0	25.5	8.26	6.85	1.64	12.0	24.0	Q1-2