

8 to 12GHz 10dB Directional Coupler

FPC06150

www.knowlesc capacitors.com

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
- Excellent Repeatability
- Wirebond
- Moisture Sensitivity Level: MSL1
- Frequency Stable over Temperature
- 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 FPC06150-T, see additional data on page 4.

SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Max
Passband Insertion Loss* (dB)	8 - 12		0.3
Passband Return Loss (dB)		12	
Coupling (dB)		10	12
Directivity (dB)		10	
CW Input Power** (W)			25
$\theta_{JC} \left(\frac{^{\circ}\text{C}}{\text{W}} \right)$	3		
Size (L x W x H)	0.130 x 0.090 x 0.015 in 3.30 x 2.29 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 125°C base temperature.

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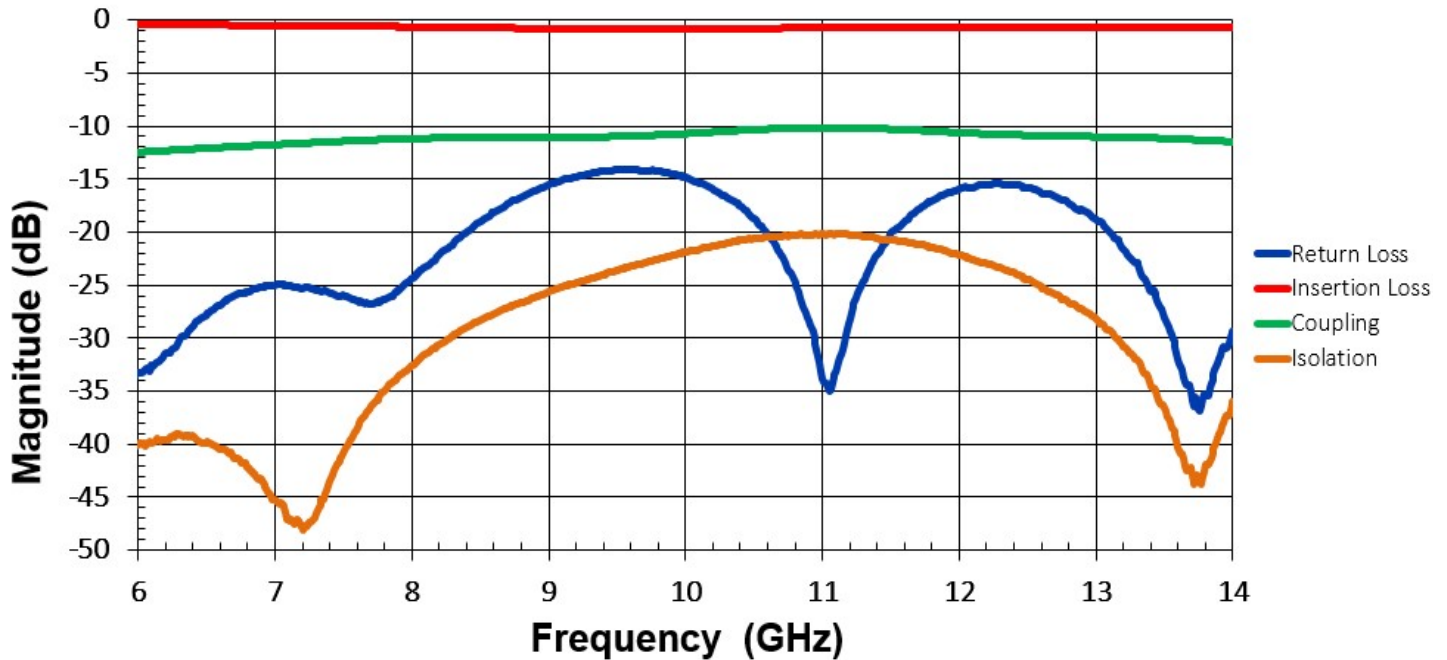
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To Order Contact KCCSales@knowles.com | For Technical Inquiries Contact DLIengineering@knowles.com

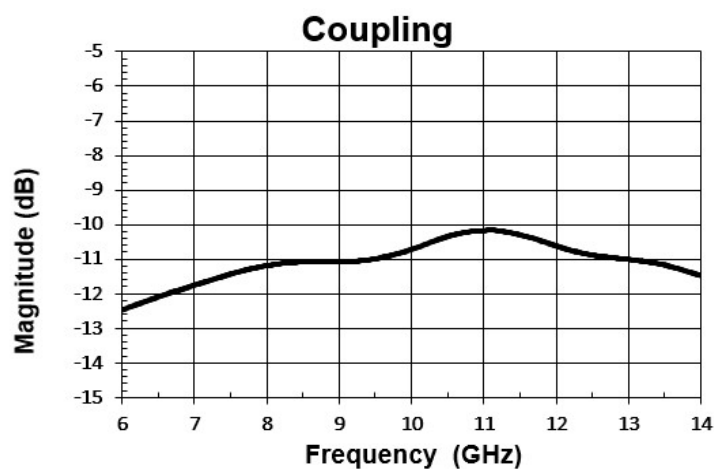
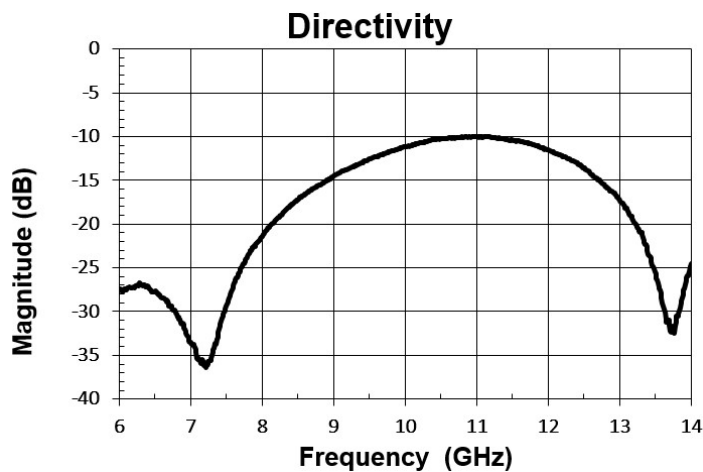
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Typical Measured Performance*



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

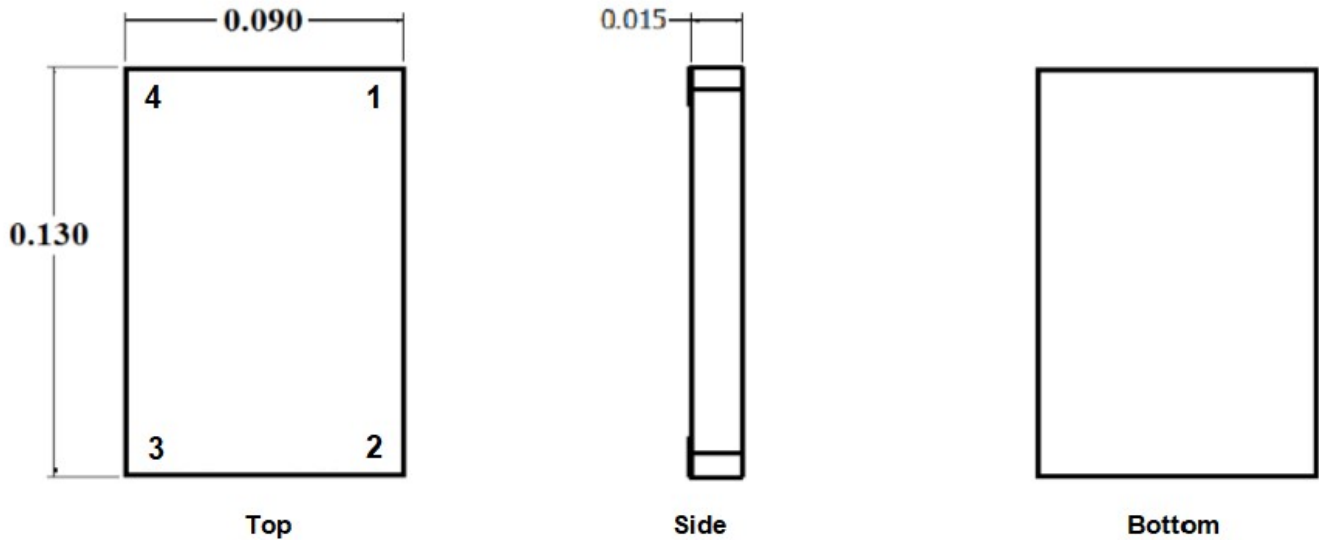


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Physical Dimensions

Units = Inches



Notes :

1. Termination Finish: Gold

2. Maximum Assembly Process Temperature: 250°C

Tolerances:

- For values with 3 decimal places ± 0.001

For values with 4 decimal places ± 0.0005

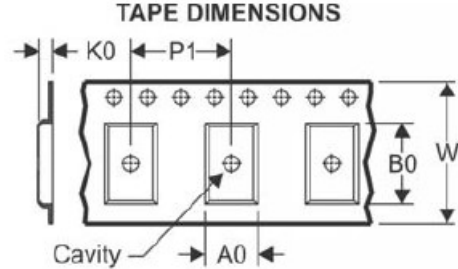
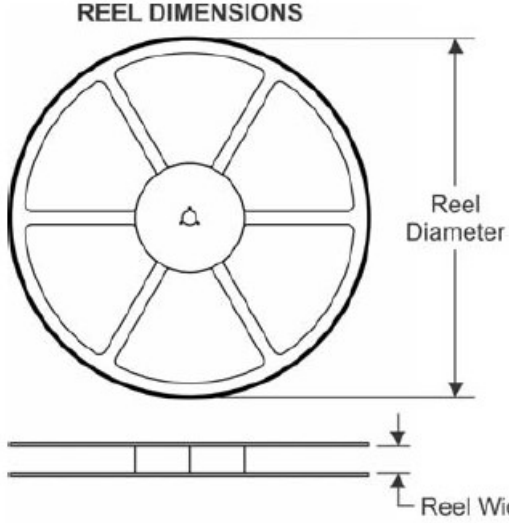
FPC06150 Coupler Port Configuration				
	Port 1	Port 2	Port 3	Port 4
Configuration 1	Input	Output	Isolated	Coupled
Configuration 2	Output	Input	Coupled	Isolated
Configuration 3	Coupled	Isolated	Output	Input
Configuration 4	Isolated	Coupled	Input	Output

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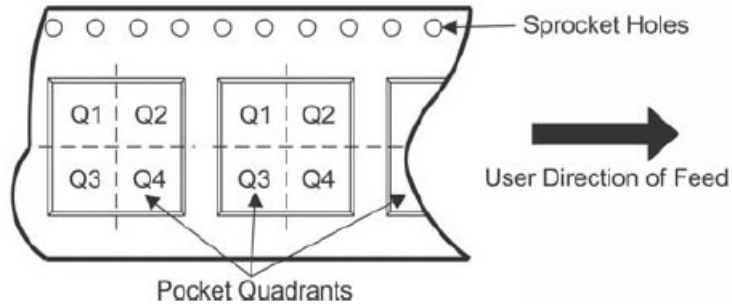
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TAPE AND REEL INFORMATION



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	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
FPC06150-T	WB	180	8.4	2.5	3.4	1.	4	8	Q2

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