

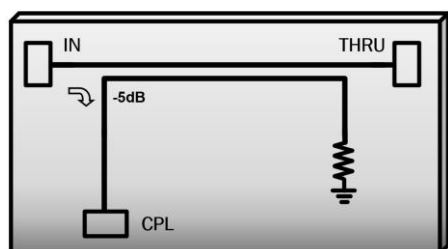
Alumina Substrate 5dB Directional Coupler (6-12GHz)

Typical Applications

- Communication Systems
- Test Equipment

Features

- Frequency Range: 6.0 – 12.0 GHz
- Coupling: 5dB \pm 0.5
- 50 Ω Matched RF Ports
- Low loss, hard Alumina substrate, Gold Wire bondable
- Substrate Size: 4.188 x 1.450 x 0.254 mm



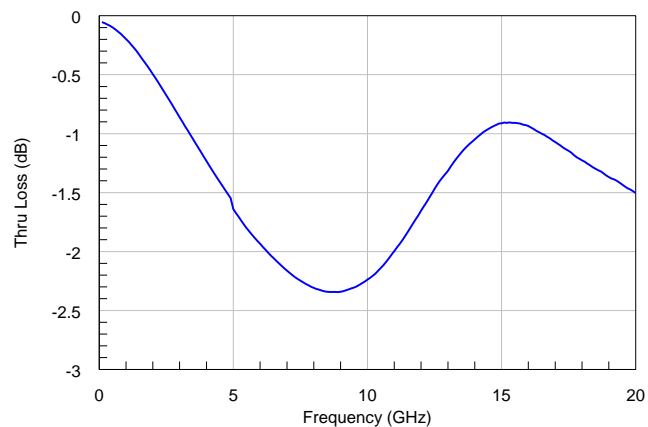
Electrical Specifications (TA = +25°C)

Parameter	Units	Minimum	Typical	Maximum
Frequency	GHz	6.2		11.3
Thru Loss	dB			2.4
Coupling	dB		5.0	
Coupling Flatness	dB		\pm 0.5	
Return Loss (IN)	dB	13	15	
Return Loss (THRU)	dB	12	15	
Return Loss (CPL)	dB	13	15	
Package Type			Substrate	

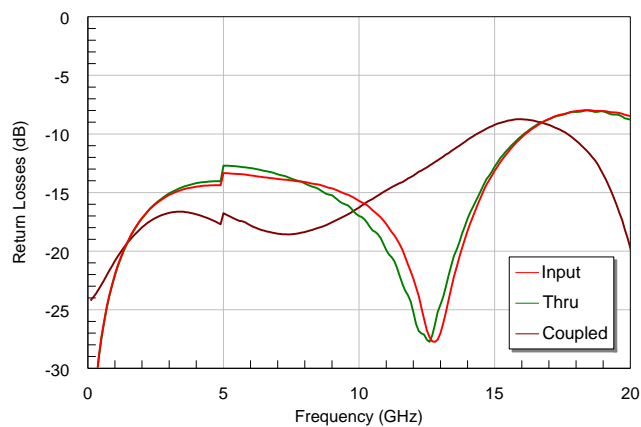
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Performance Graphs

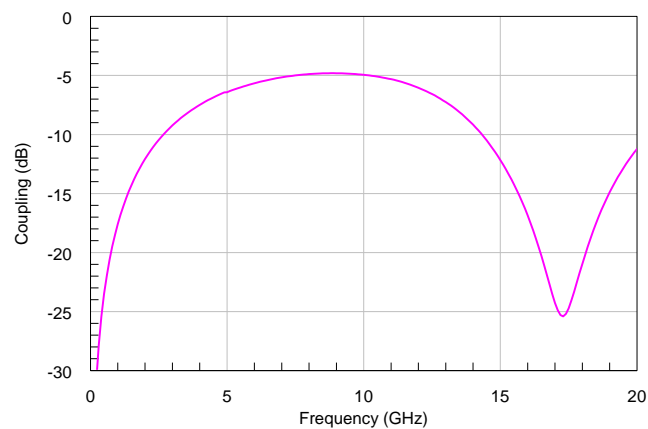
Thru Loss



Return Losses

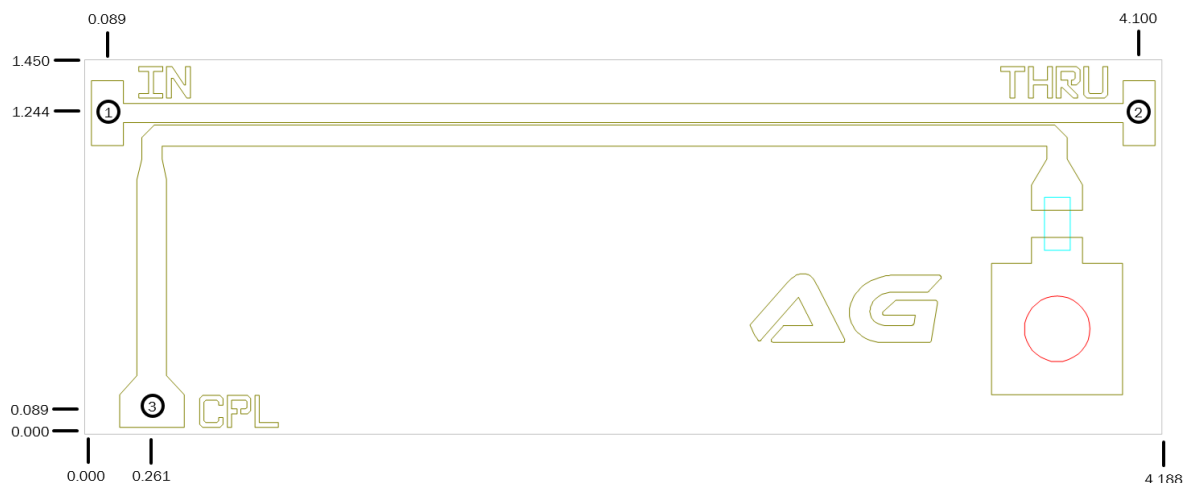


Coupling



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Outline Drawing (dimensions in mm)



Pad Descriptions

Pad	Function	Pad Size	Description
1	IN	125x250μm	DC coupled 50Ω Matched
2	THRU	125x250μm	DC coupled 50Ω Matched
3	CPL	250x125μm	AC coupled 50Ω Matched
Die Bottom	GND	Backside	Epoxy/Solder to Baseplate

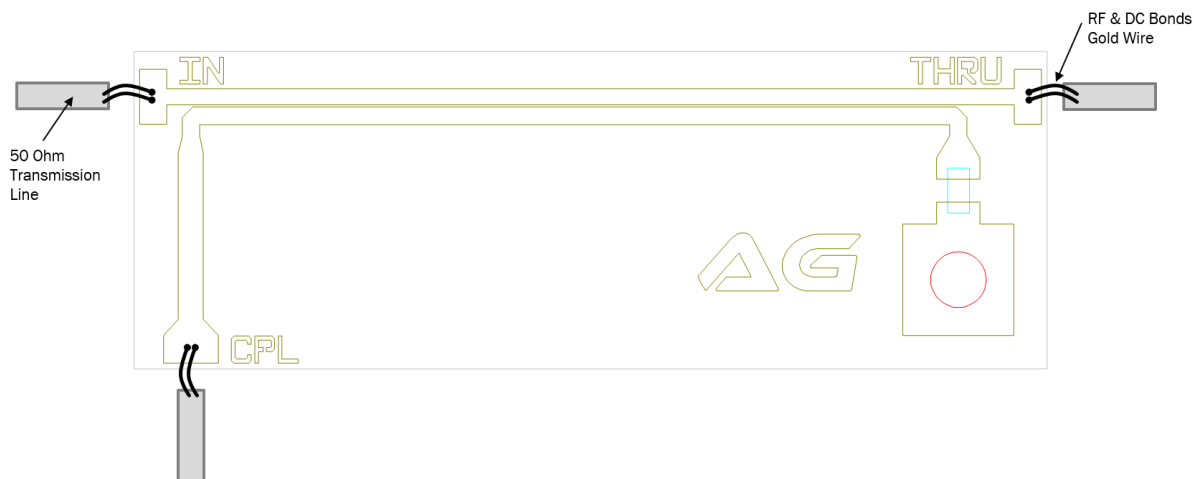
*See Assembly Diagram

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-65 to 150°C
Operating Temperature	-55 to 85°C

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Assembly Diagram



Assembly Notes:

1. TFN Thickness is 254 μ m Polished 99.6% Alumina
2. Backside and Bondpad metallization: 2.5 μ m gold
3. Silver Epoxy or AuSn Eutectic attach MMIC

Die Packaging Information

- GP-4 (Gel-Pak)

N002-5 Datasheet v01	Information on this datasheet is believed to be accurate and reliable. Specifications are subject to change without notice	For price, delivery, and place to order contact: AmpliTech Sales 155 Plant Avenue, Hauppauge, NY 11788 USA Tel. +1 631.521.7831 Order online at www.AmpliTechInc.com	Pg.4
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