AGN-002-5

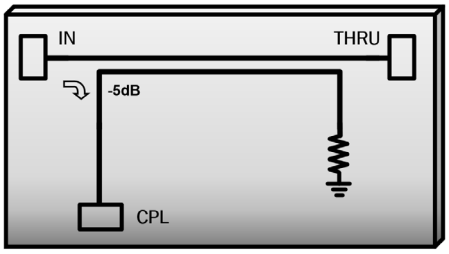
Alumina Substrate
5dB Directional Coupler (6-12GHz)

Typical Applications

- Communication Systems
- Test Equipment

Features

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





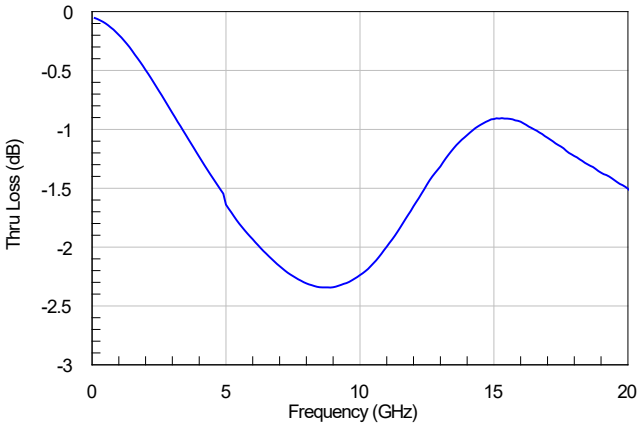
Electrical Specifications (TA = +25°C)

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

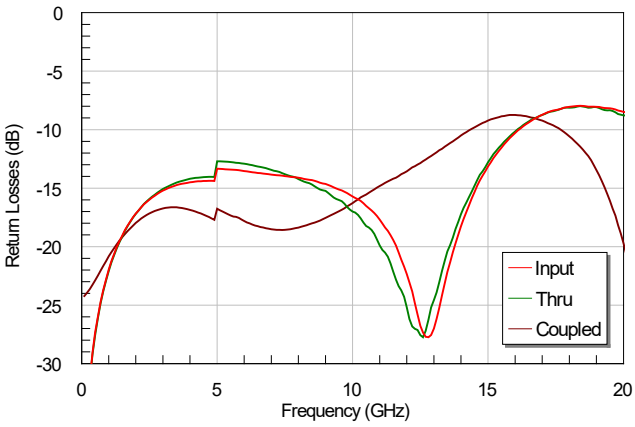
Couplers - Substrate

Performance Graphs

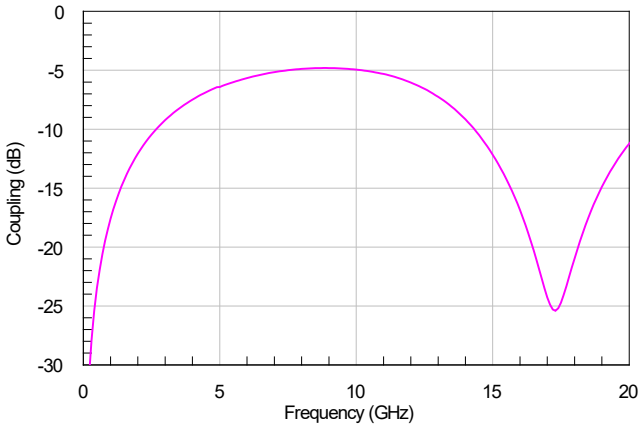
Thru Loss



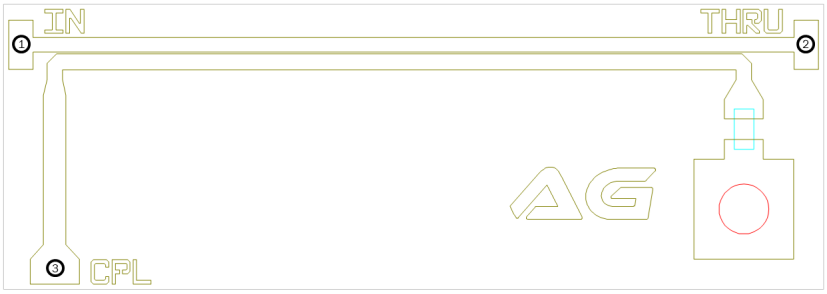
Return Losses



Coupling



Outline Drawing



Pad Descriptions

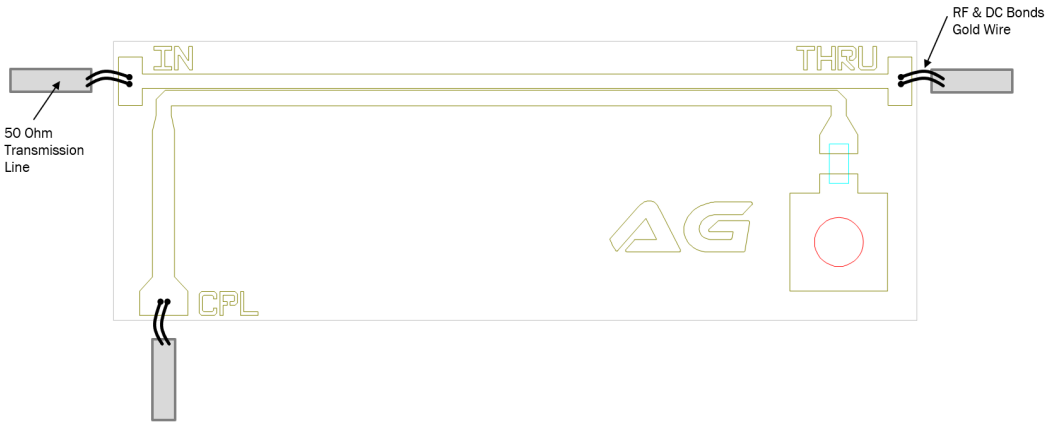
Pad	Function	Pad Size	Description
1	IN	125x250µm	DC coupled 50Ω Matched
2	THRU	125x250µm	DC coupled 50Ω Matched
3	CPL	250x125µm	AC coupled 50Ω Matched
Die Bottom	GND	Backside	Epoxy/Solder to Baseplate

*See Assembly Diagram

Absolute Maximum Ratings

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

Assembly Diagram



Assembly Notes:

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

Die Packaging Information

- GP-4 (Gel-Pak)

Important Notice

The information contained in this Data Sheet and any associated documents is believed to be reliable; however, AmpliTech makes no warranties regarding the Data Sheet Information and assumes no responsibility of liability whatsoever for the use of the said information. All Data Sheet information is subject to change without notice.