AGN-001

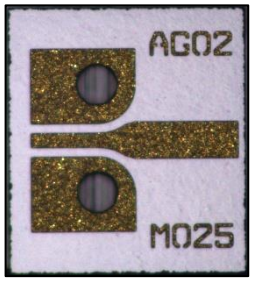
Alumina Substrate
GSG Probe to Microstrip Transition

Typical Applications

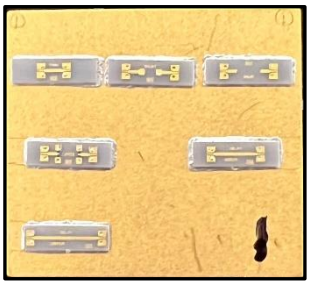
- MMIC Characterization & Test
- Module Transitions

Features

- Frequency Range: 0.0 – 50.0 GHz
- Loss: < 0.2dB per transition
- Return Loss: >25dB over band
- Low loss, hard Alumina substrate, Gold Wire bondable
- TRL Calibration standards available
- Transition Substrate Size: 0.80 x 0.90 x 0.127 mm
- Supports 100-250µm pitch GSG probes



GSG Probe to Microstrip Transition (N001)



TRL Calibration Substrate (N001-CAL)

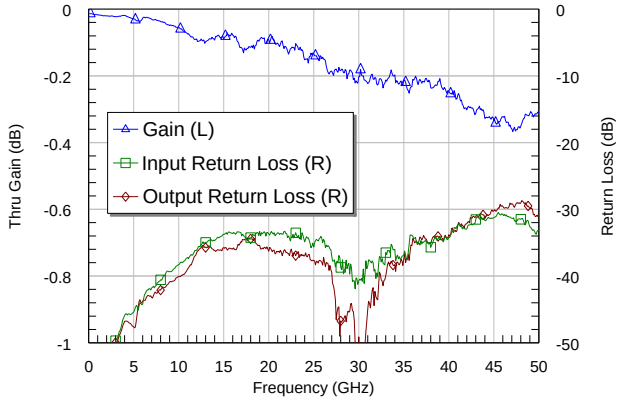
Electrical Specifications (TA = +25°C)

Parameter	Units	Minimum	Typical	Maximum
Frequency	GHz	0		50.0
Loss	dB			0.2
Input Return Loss	dB	25		
Output Return Loss	dB	25		
Package Type			Die	

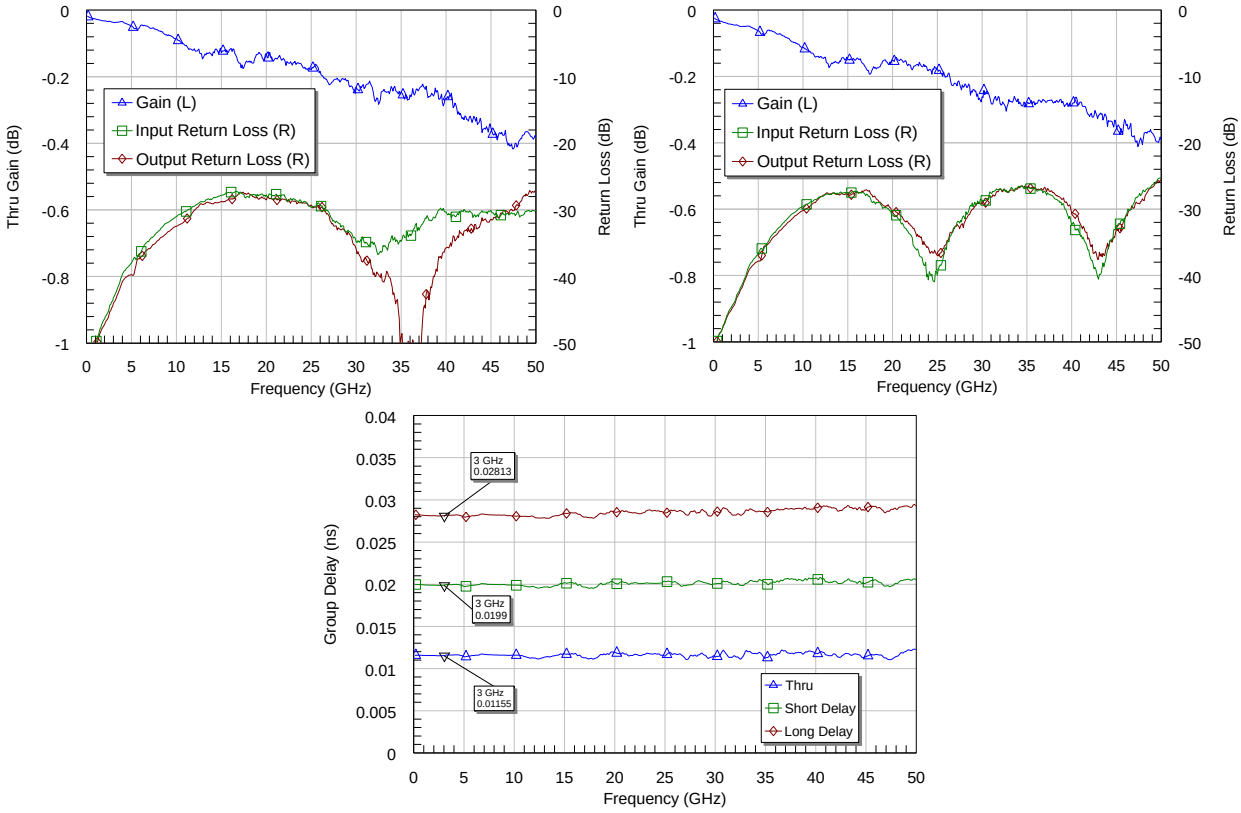
RF Transition - Substrate

Performance Graphs

Gain and Return Losses of the Calibration Thru Line*

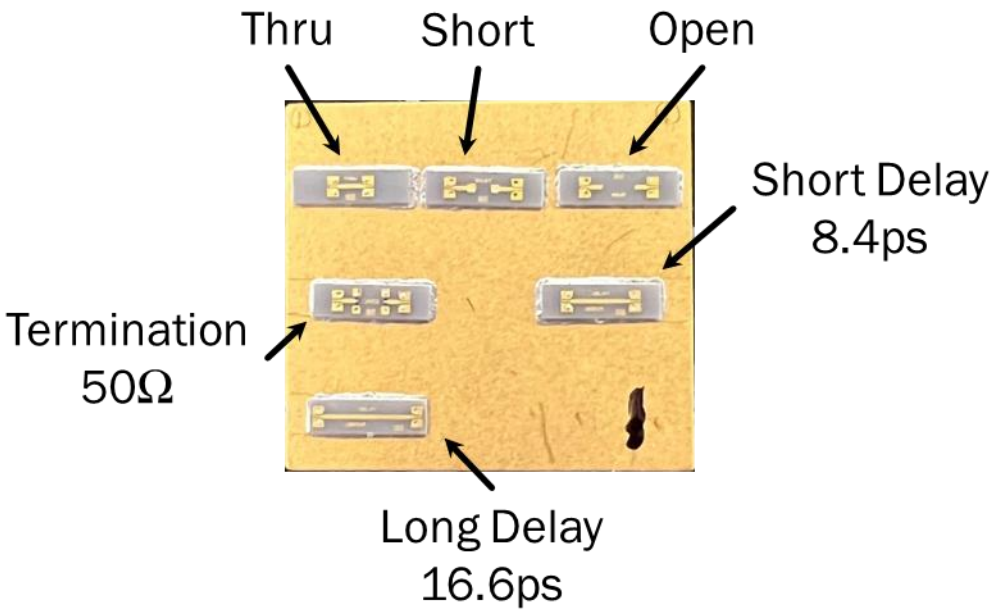


Gain/Return Losses/Group Delay of the Calibration Short and Long Delay Lines*



* Measured data with GSG probe tip calibration

Calibration Substrate (N001-CAL)

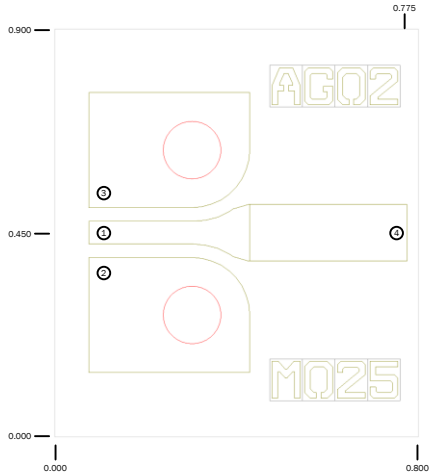


Calibration Standard:

The TFN calibration standards are fully assembled on a gold-plated metal carrier to provide a resonance free, easy-to-use calibration substrate. The standard moves the RF electrical reference plane after TRL or SOLT calibration to the center of the Thru standard on the Vector Network Analyzer.

- N001-THRU
- N001-SHORT
- N001-OPEN
- N001-LOAD2 (Termination 50Ω)
- N001-DELAY2 (8.4ps)
- N001-DELAY3 (16.6ps)

Outline Drawing (dimensions in mm)



Pad Descriptions

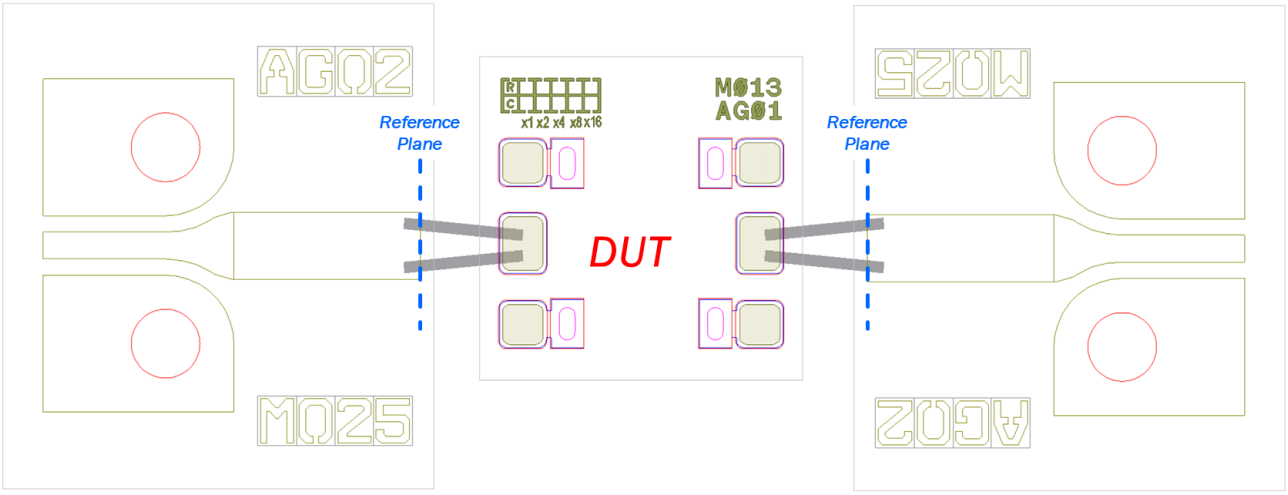
Pad	Function	Description
1	GSG	GSG Signal Pad
2	GSG	GSG Ground Pad
3	GSG	GSG Ground Pad
4	BW	Bondwire pad for connection to MMIC
Die Bottom	GND	Epoxy/Solder to Baseplate

* Compatible with 100-250µm pitch GSG probes

Absolute Maximum Ratings

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

Example Assembly Diagram



Assembly Notes:

1. TFN Thickness is 127µm 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)