AGATNxx

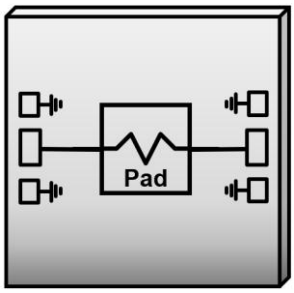
GaAs MMIC
Fixed Attenuator Series

Typical Applications

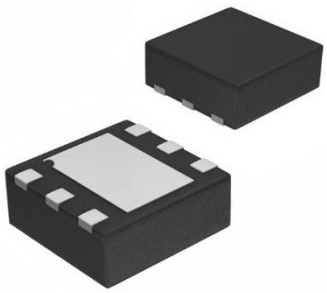
- Communication Systems
- Point to Point Radio
- Fiber Optics
- Test Equipment
- Wideband Military & Space

Series Features

- Frequency Range: DC to 50GHz
- 50Ω Matched DC coupled RF Ports
- Attenuator values from 0-10dB
- Die Size: 1.00 x 0.75 x 0.1 mm; Matches AGLPFxxx, AGBPFxxx, AGBSFxxx, and AGTRMxxx series MMICs
- Package: 2x2DFN 6 Lead







AGATNxx Series Parts

MMIC Die	Package P/N	Description	Page No.
AGATN00	P01	0dB Fixed Attenuator (Thru Line)	2
AGATN02	P02	2dB Fixed Attenuator	3
AGATN03	P03	3dB Fixed Attenuator	4
AGATN06	P04	6dB Fixed Attenuator	5
AGATN10	P05	10dB Fixed Attenuator	6

AGATN00

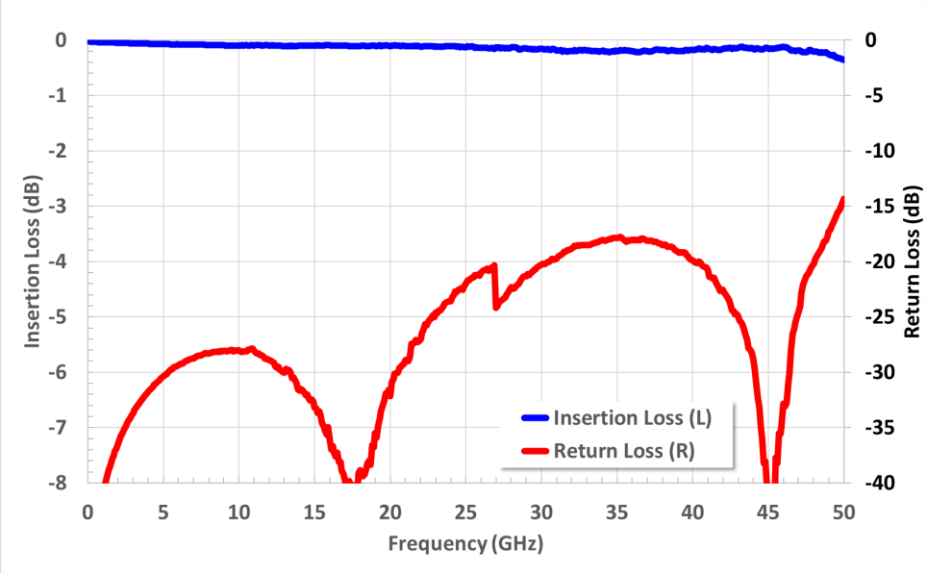
GaAs MMIC
0dB Fixed Attenuator (Thru Line)

Features

- Frequency Range: DC to 50GHz
- 50Ω Matched DC coupled RF Ports
- Insertion Loss: 0.13dB @ 25GHz

Performance Graphs

Insertion and Return Loss (Measured)



Electrical Specifications (TA = +25°C)

Parameter	Units	Minimum	Typical	Maximum
Frequency	GHz	DC		50
Insertion Loss	dB		0.13	0.5
Return Loss	dB	14	25	
Package Type			Die	

AGATN02

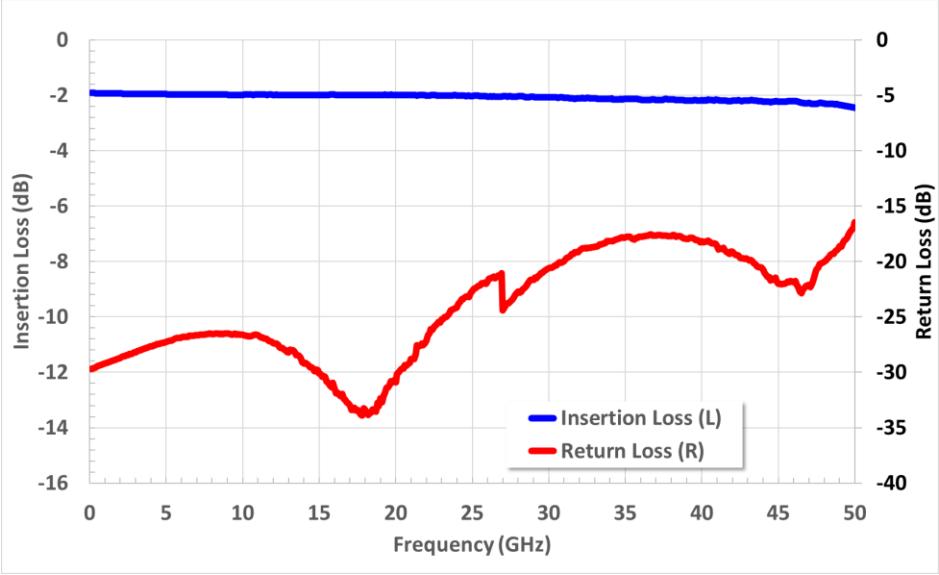
GaAs MMIC
2dB Fixed Attenuator

Features

- Frequency Range: DC to 50GHz
- 50Ω Matched DC coupled RF Ports
- Insertion Loss: 2.07dB @ 25GHz

Performance Graphs

Insertion and Return Loss (Measured)



Electrical Specifications (TA = +25°C)

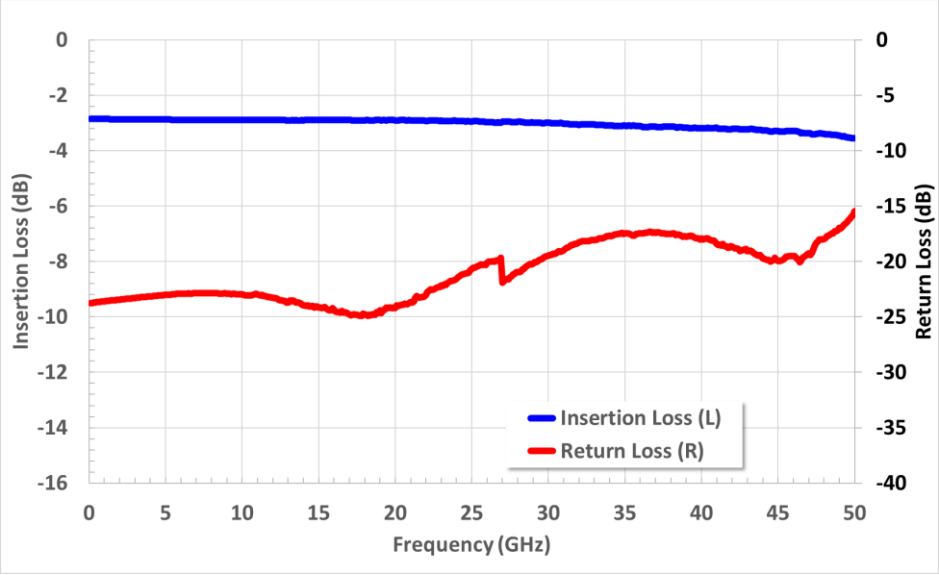
Parameter	Units	Minimum	Typical	Maximum
Frequency	GHz	DC		50
Insertion Loss	dB		2.07	2.53
Return Loss	dB	16	25	
Package Type			Die	

Features

- Frequency Range: DC to 50GHz
- 50Ω Matched DC coupled RF Ports
- Insertion Loss: 2.96dB @ 25GHz

Performance Graphs

Insertion and Return Loss (Measured)



Electrical Specifications (TA = +25°C)

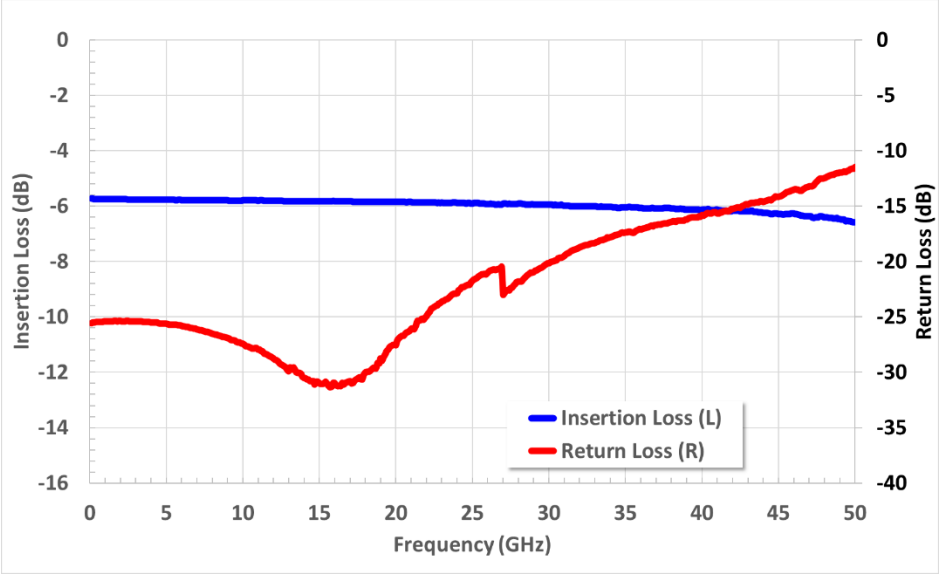
Parameter	Units	Minimum	Typical	Maximum
Frequency	GHz	DC		50
Insertion Loss	dB		2.96	3.52
Return Loss	dB	16	25	
Package Type			Die	

Features

- Frequency Range: DC to 50GHz
- 50Ω Matched DC coupled RF Ports
- Insertion Loss: 5.98dB @ 25GHz

Performance Graphs

Insertion and Return Loss (Measured)



Electrical Specifications (TA = +25°C)

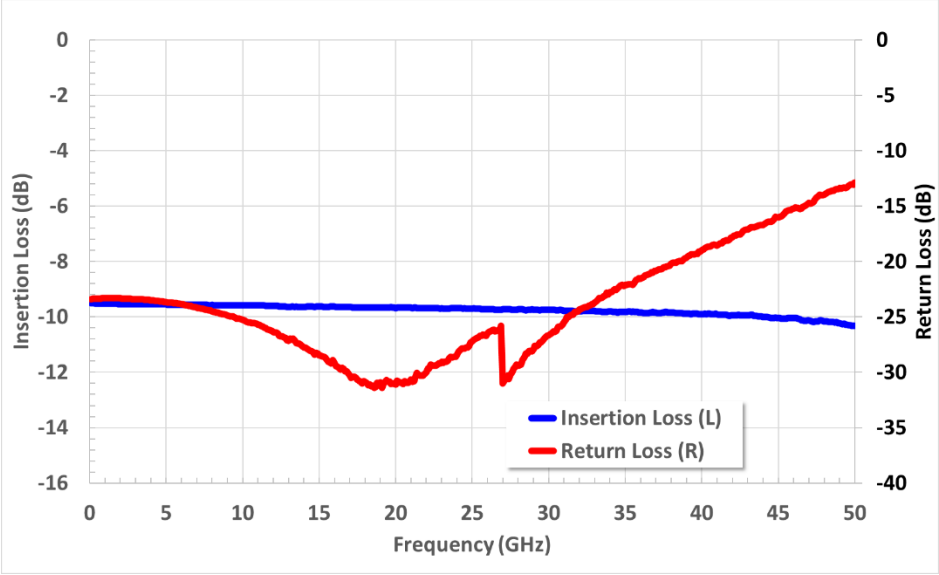
Parameter	Units	Minimum	Typical	Maximum
Frequency	GHz	DC		50
Insertion Loss	dB		5.98	6.51
Return Loss	dB	17	25	
Package Type			Die	

Features

- Frequency Range: DC to 50GHz
- 50Ω Matched DC coupled RF Ports
- Insertion Loss: 9.87dB @ 25GHz

Performance Graphs

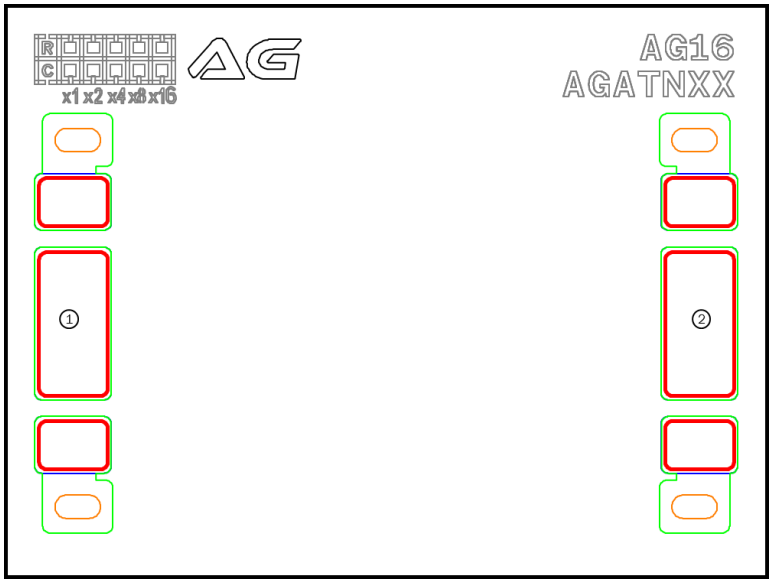
Insertion and Return Loss (Measured)



Electrical Specifications (TA = +25°C)

Parameter	Units	Minimum	Typical	Maximum
Frequency	GHz	DC		50
Insertion Loss	dB		9.87	10.33
Return Loss	dB	18	23	
Package Type			Die	

Outline Drawing



Pad Descriptions

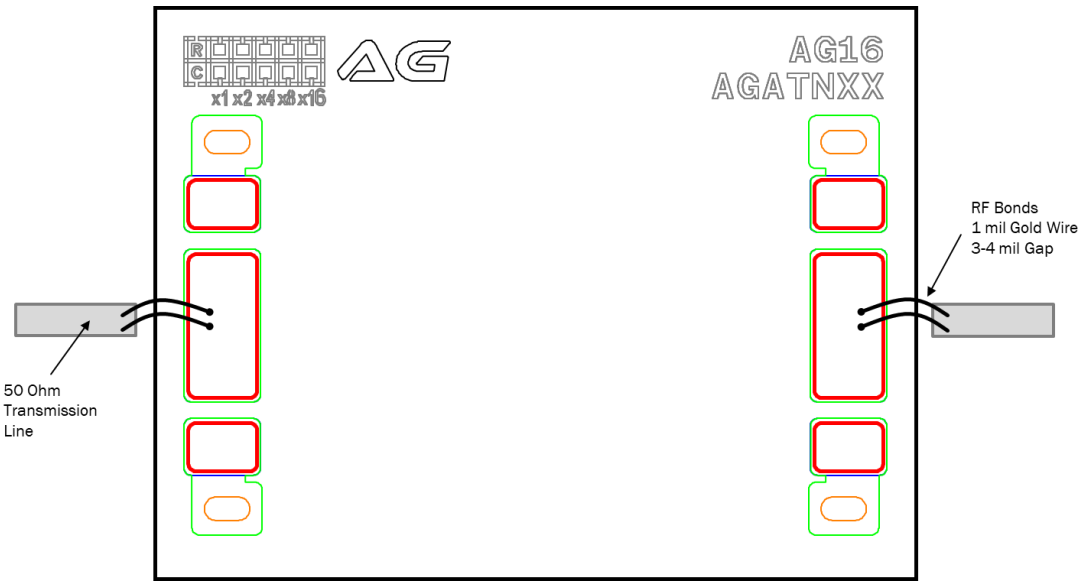
Pad	Function	Pad Size	Description
1	RFIN	101x200µm	DC coupled 50Ω Matched
2	RFOUT	101x200µm	DC coupled 50Ω Matched
Die Bottom	GND	Backside	Epoxy/Solder to Baseplate

Absolute Maximum Ratings

Parameter	Rating
Drain Bias Voltage (VDD)	No Bias
RF Input Power (RFIN)	+20dBm*
Channel Temperature	150°C
Storage Temperature	-65 to 150°C
Operating Temperature	-55 to 85°C

*To be tested

Assembly Diagrams



Assembly Notes:

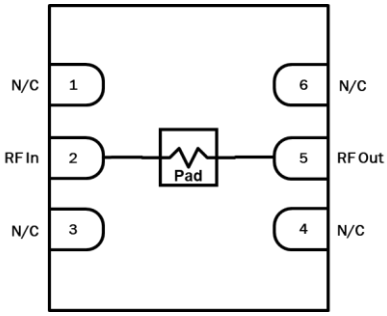
1. Die Thickness is 100µm
2. Bondpad metallization: 7µm gold
3. Backside metallization: 4.5µm gold
4. Silver Epoxy or AuSn Eutectic attach MMIC



Die Packaging Information

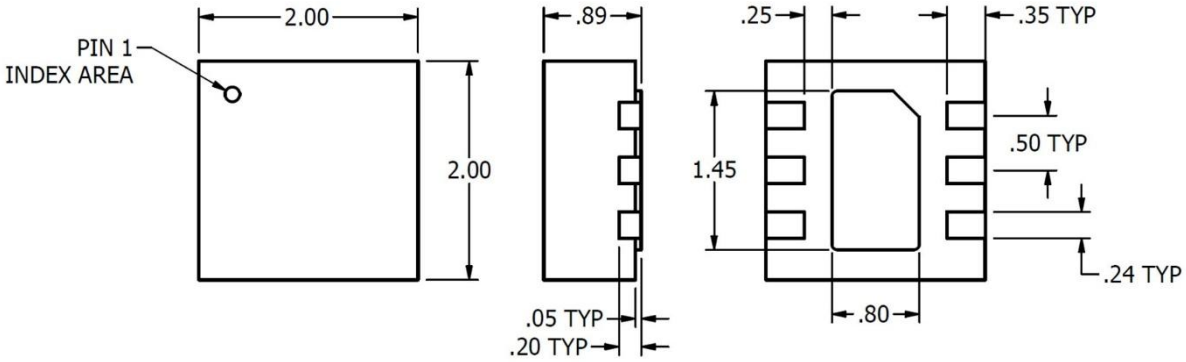
- GP-4 (Gel-Pak)

Package Configuration and Descriptions



Pin	Function	Description
2	RFIN	DC coupled 50Ω Matched
5	RFOUT	DC coupled 50Ω Matched
1,3,4,6	N/C	No connect, recommend connect to RF/DC GND
DFN Paddle	GND	Epoxy/Solder to RF/DC GND

Package Marking and Dimensions



Notes:

1. All dimensions are in millimeters. Angles are in degrees.
2. Contact plating: NiPdAu

Important Notice

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