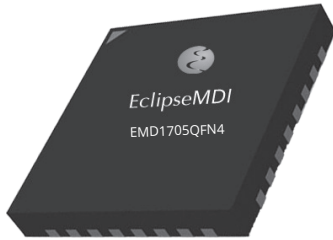


EMD1705QFN4 Driver Amplifier

DC-20 GHz GaAs PHEMT MMIC



Eclipse Microdevices EMD1705QFN4 is a GaAs MMIC PHEMT distributed general purpose driver amplifier. This MMIC is ideal for applications that requires a typical P1dB output power of +23 dBm up to 14 GHz, while requiring only 190mA from a + 8 Volt supply. Gain flatness of this device is less than 2.0 dB from DC to 20 GHz. The EMD1705QFN4 comes in a small RoHS compliant 4mm QFN leadless package and has excellent RF and thermal properties, ideal for commercial and industrial applications.

Technical Characteristics

Product Features
15.0 dB gain @ 10 GHz
+24.0 dBm P1dB output power @ 10 GHz
+8.0V @ 190 mA typical supply voltage
Low cost QFN 4mm leadless RoHS compliant/hermetically sealed

Max. Ratings	
RF Input Power:	+18.0 dBm
Drain Voltage (Vdd):	+8.0 VDC
Gate Voltage (Vgg):	-2.0 to 0 VDC
Max. T _J 85° C:	+110°C
Storage Temperature:	-55 to +150°

Electrical Specifications @ +25°C, Vdd= 8.0, Ids= 190mA

Parameters	Freq. (GHz)	Min.	Typical	Max.	Units
Gain	2		16.7		dB
	8		15.5		dB
	14		17.5		dB
	20		15.3		dB
Gain Flatness	DC to 10.0 GHz		+/- 1.00	+/- 1.40	dB
	10.0 to 20 GHz		+/- 1.45	+/- 1.80	dB
Gain Variation Over Temperature				0.02	dB/°C
Noise Figure			6.5		dB
Input Return Loss			10		dB
			10		dB
			10		dB
Output Return Loss	10		8		dB
			9.3		dB
			8		dB
1dB Compression Point	2		23		dBm
	8		24		dBm
	14		22.5		dBm
	20		19.1		dBm
Saturated Output Power	2		25		dBm
	8		24.6		dBm
	14		24.2		dBm
	20		21		dBm

About EclipseMDI

ECLIPSE MDI is located in San Jose, California. ECLIPSE has been developing high performance analog semiconductors for use in wireless radio frequency (RF), microwave, and millimeter wave for commercial and industrial applications. ECLIPSE has formed a strategic alliances - with foundries that feature leading state-of-the-art process technologies and with manufacturing facilities for high-volume production of innovative RFIC's.

Product Export
Classification
ECCN: EAR 99 (NLR)
HTS: 8542.33.0001



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Quality products that serve the industry. Today and tomorrow.

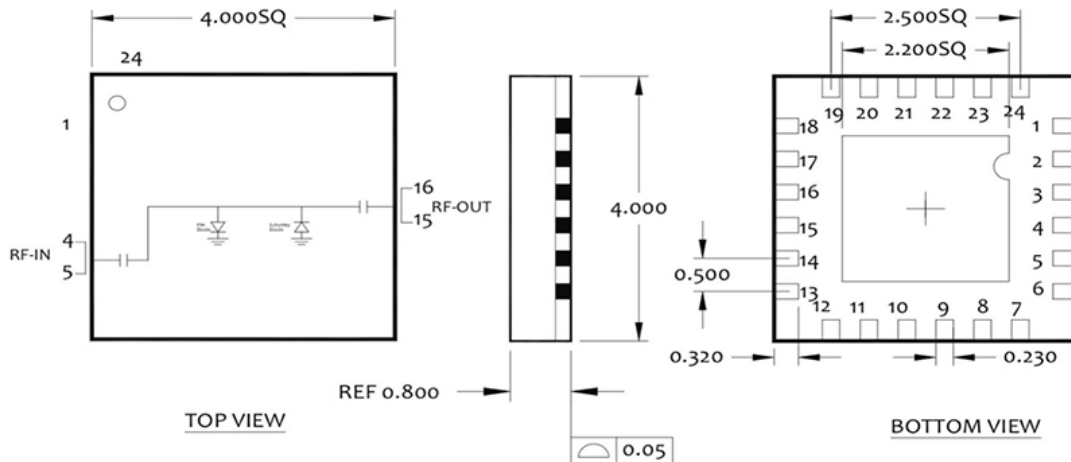
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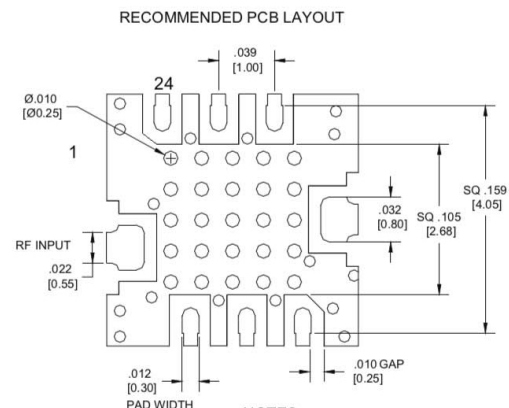
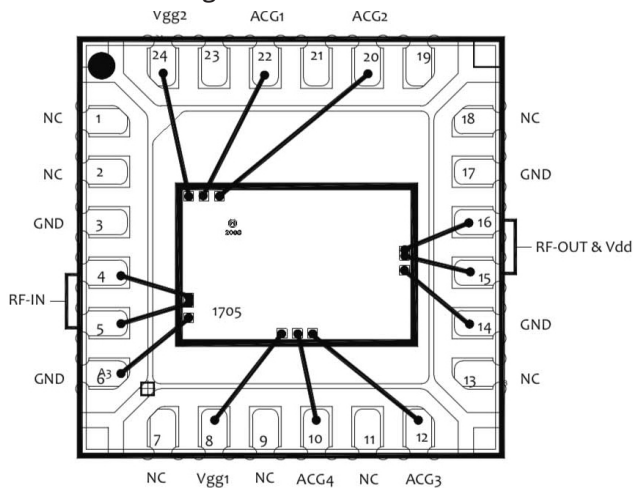
EclipseMDI
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Outline Drawing



Functional block diagram

Recommended PCB layout



NOTES:
1. MATERIAL: ROGERS 4350, 10 MIL THICK
2. DIMENSIONS ARE IN INCHES[MM]

Application Circuit

Application Circuit

