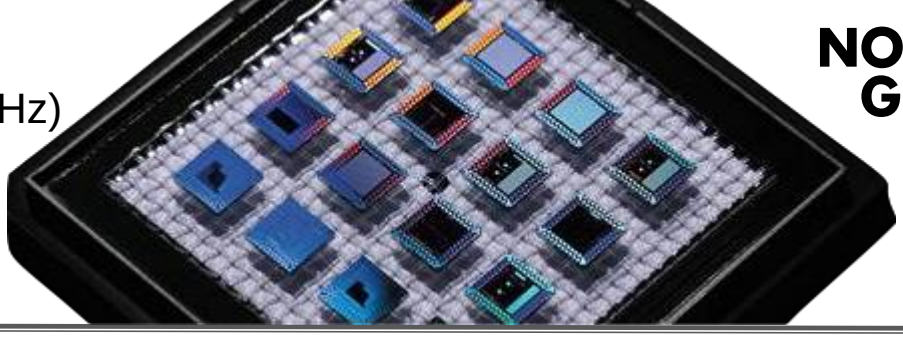
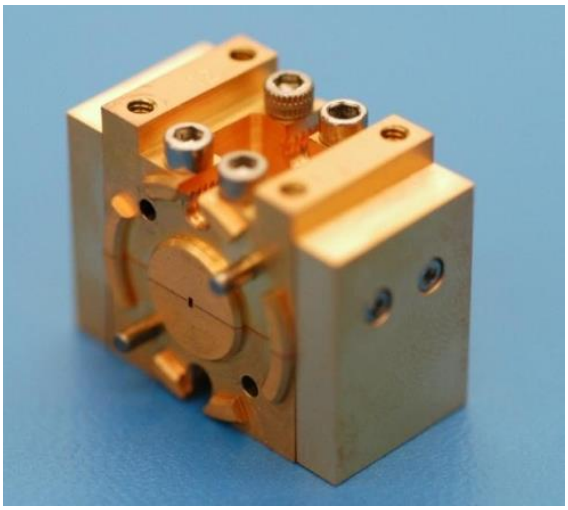
MGA2101

WR-3.4 (220-325 GHz)
Gain Block



NORTHROP GRUMMAN

Revision 2022-1



Product Description

The MGA2101 is a broadband, low-noise sub-millimeter wave amplifier block. It can be used in applications such as sub-millimeter-wave imaging, commercial digital microwave radios and wireless LANs. For ease of connectivity into systems, standard waveguide rectangular transitions are used to and from the modules. The module uses standard WR-3.4 interfaces

Applications

- Sub-millimeter-wave Imaging
- Sensors
- Radar
- Short Haul / High Capacity Links
- Communication Links

Product Features

- RF frequency: 220-325 GHz
- Noise Figure: 5 dB, typical
- Linear Gain: 13 dB, typical
- Broadband gain
- 1 mW output power
- Waveguide module (WR-3.4 Waveguide Interfaces)
- DC power: Single bias operation (Tailorable)
- Module Size: ~ 1”x0.75”x1”
- Unconditionally Stable

Export Information

ECCN: **TBD**

HTS (Schedule B) code: **TBD**

Web: http://www.yeswegan.com

Phone: (310) 814-5000 • Fax: (310) 812-7011 • E-mail: as-mps.sales@ngc.com

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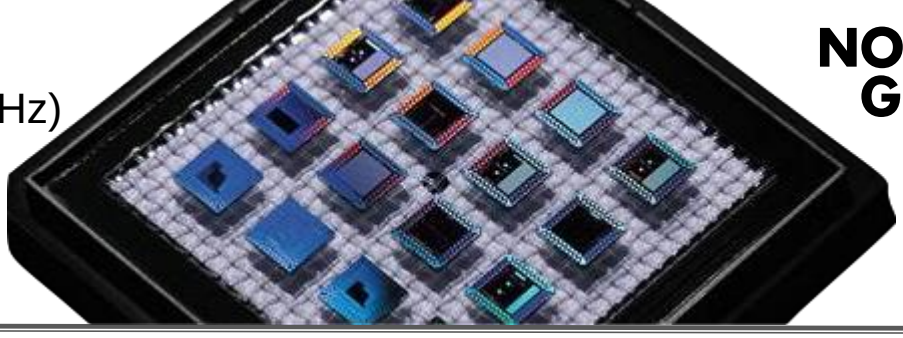

NORTHROP GRUMMAN

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Absolute Maximum Ratings

Parameter	Value	Unit
Bias Voltage	2	V
Bias Current	30	mA
Input Power	-15	dBm

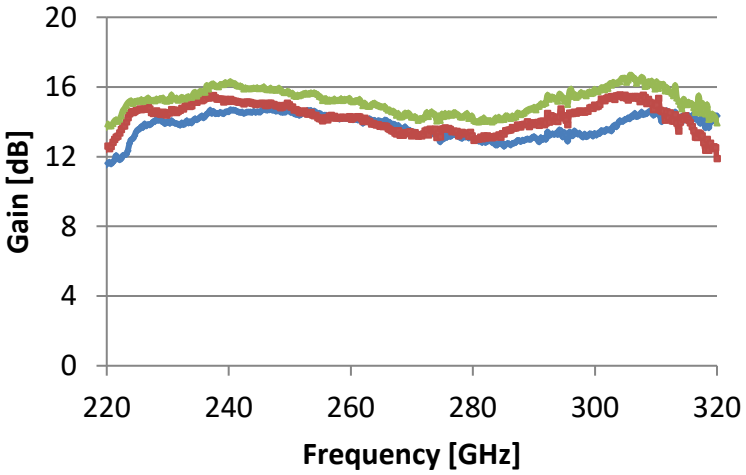
Recommended Operating Conditions

Parameter	Value	Unit
Drain Voltage Range	1.5-2.0	V
Gate Voltage Range	0.0-1.0	V
Drain Current (Idq)	24	mA

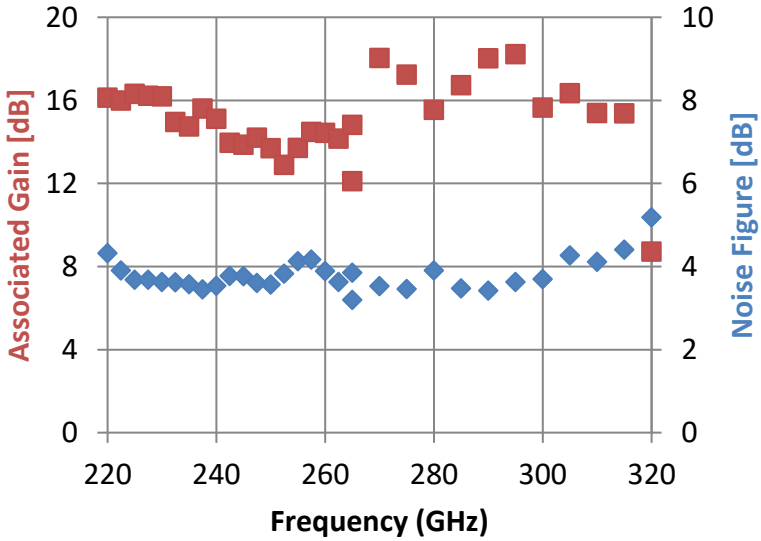
Performance Characteristics (Ta = 25°C)

Specification	Min	Typ	Max	Unit
Frequency	220		320	GHz
Linear Gain		13		dB
Noise Figure		5		dB
Output Power		1		mW
Bias Voltage		1.75		V
Bias Current		24		mA

Packaged LN275



Packaged LN275



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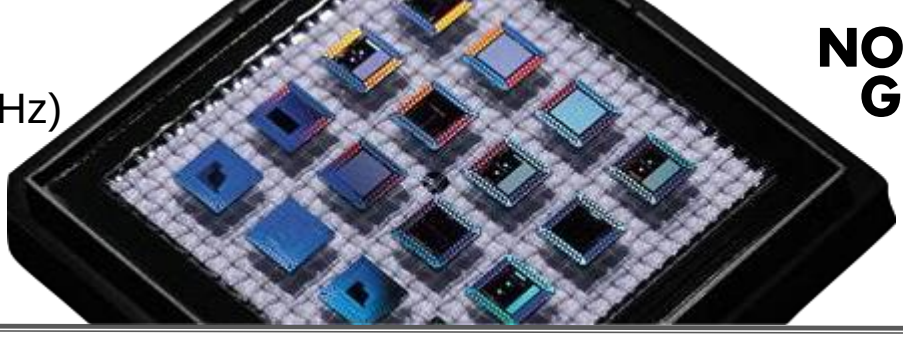

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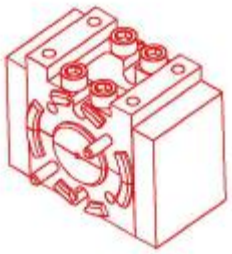
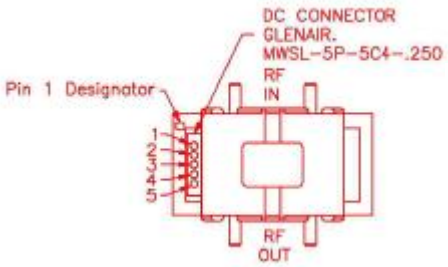
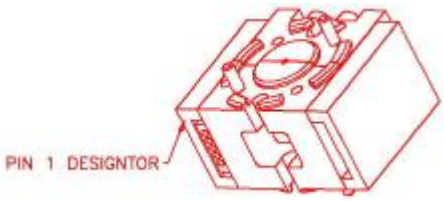
OUTLINE & PIN DRAWINGS



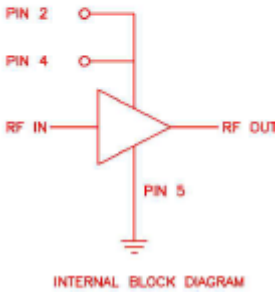


LEGEND		
PIN	DESN.	BIAS
1	NC	N/A
2	V+	2.0 V
3	NC	N/A
4	V+	2.0 V
5	GND.	GND.



Bias

Each module will be provided with bias information and reference performance data.



INTERNAL BLOCK DIAGRAM

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