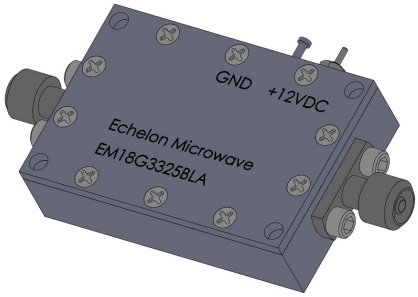
Broadband Low Noise Amplifier, 0.1-18GHz

Features

- Broadband Low Noise
- Gain, 33dB
- P1dB, 25dBm / 316mW
- SMA Connectors, Field Replaceable
- Single DC Supply, 12VDC
- Wide Operating Temp Range, -40 - +85° C



EM18G3325BLA

Overview

The Echelon Microwave EM18G3325BLA module is a broadband low noise amplifier with two stages and is based on GaAs pHEMT MMIC technology. It operates over a wide frequency range of 100MHz to 18.0GHz and provides a small signal gain of 33dB, along with a power output of 25dBm at 10GHz. This amplifier is characterized by its excellent gain flatness and good VSWR at the input and output, and it requires only a single positive DC power supply. Additionally, the amplifier features a built-in DC voltage regulator that enables it to operate effectively over a range of DC supply voltages without affecting its RF performances.

ELECTRICAL SPECIFICATION (25° C, sea level)				
Description	**Min**	**Typ**	**Max**	**Units/Note**
Frequency	0.1		18	GHz
Gain	30	33	36	dB, 25° C Baseplate
Gain Flatness		±1.5	±2.0	dB, full band
Gain Variation		±2.0		dB, over temp range
P1dB, 0.1-10GHz	22	25		dBm
P1dB, 10-18GHz	19	22		dBm
Psat, 0.1-10GHz	23	27		dBm
Psat, 10-18GHz	20	24		dBm
IP3o, 0.1-10GHz	28	32		dBm, output
IP3o, 10-18GHz	23	26		dBm, output
Noise Figure, 0.1-2.0GHz		4.0	5.0	dB
Noise Figure, 2.0-3.0GHz		3.0	4.0	dB
Noise Figure, 3.0-15.0GHz		2.5	3.5	dB
Noise Figure, 15.0-18.0GHz		3.0	4.0	dB
Input VSWR		1.5:1	2.0:1	dB
Output VSWR		1.8:1	2.5:1	dB
Spurious		-70.0		dBc
DC Power	10	12	15	VDC
DC Current	200	260	300	mA, at 12VDC input
Input Power, Max			+10	dBm
Temperature	-40		85	° C
Temperature, Storage	-45		125	° C

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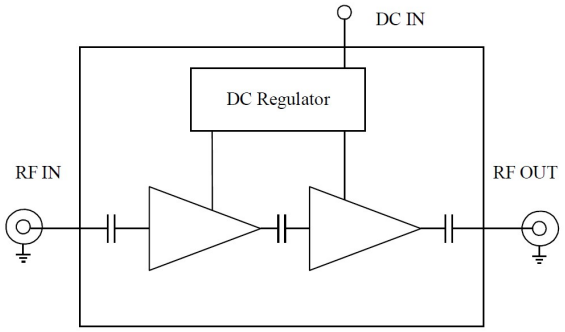
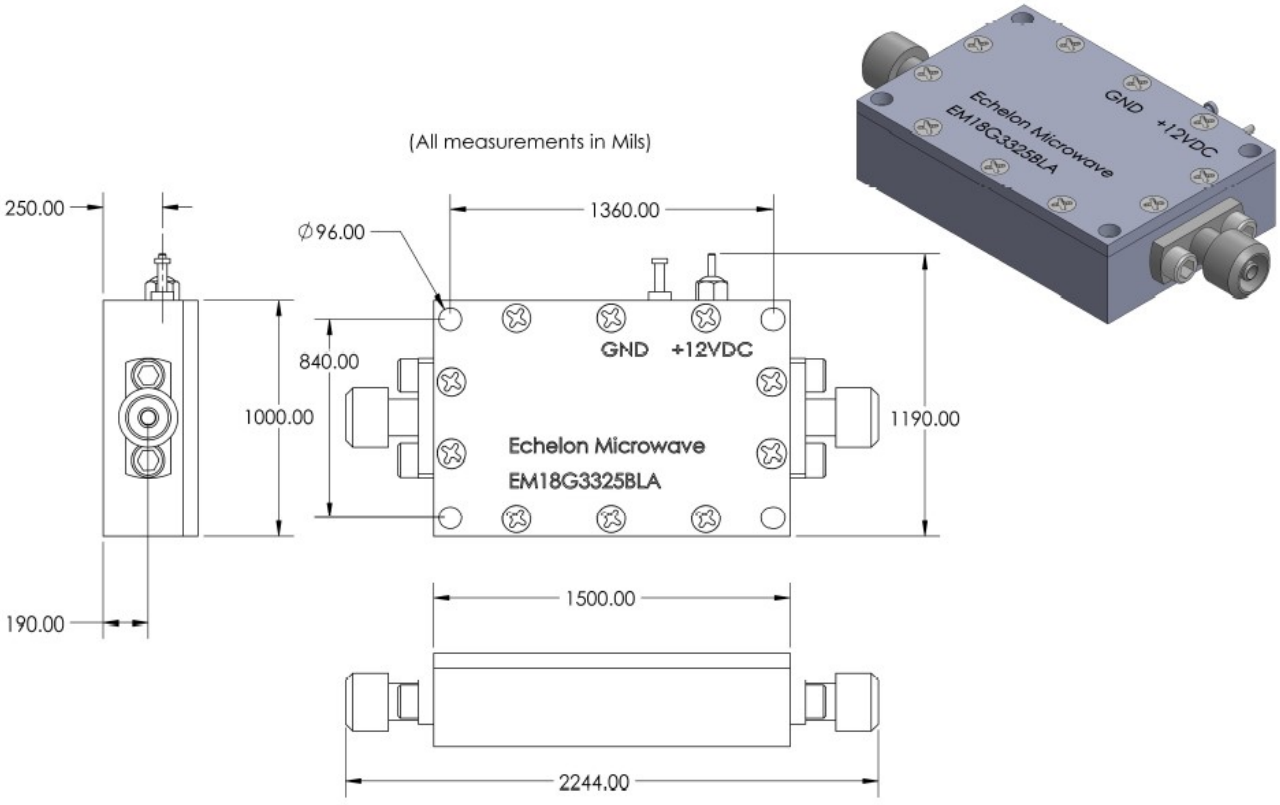
MECHANICAL SPECIFICATION, CABLE	
Description	**Specification**
Input / Output Connectors	SMA Female, Field Replaceable
DC Input	Feedthrough, Solder Pin
Dimensions	1.5x1.0.0.4 inches
Material	Aluminum, Nickel Plated
Connectors	Stainless Steel

Functional Diagram



Mechanical Structure: