A-VGAL1-3028

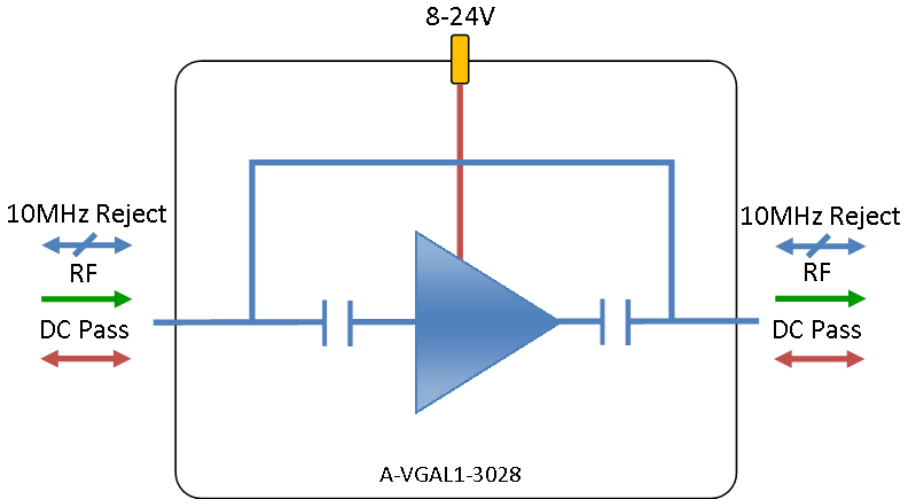
RF Engineering & Custom Build

L-band Variable Gain Amplifier

Variable Gain L-band amplifier with 0 to 30 dB gain settable in 1dB gain steps. This unit passes DC and blocks 10MHz, it also requires 8-24Volts external bias

These components are available with the following RF connector options: 50 Ω SMA, N-type, BNC and 75 Ω BNC or F-type.

Vector diagram



RF Parameters

A-VGAL1-3028-xxxx	S5S5	N5N5	B5B5	B7B7	F7F7
Frequency Range (MHz)	850-2150	850-2150	850-2150	850-2150	850-2150
RF Connectors	50Ω SMA	50Ω N-Type	50Ω BNC	75Ω BNC	75Ω F-Type
Gain*	0-30 dB	0-30 dB	0-30 dB	0-30 dB	0-30 dB
Flatness*	±0.3	±0.3	±0.4	±0.6	±0.8
Input Return Loss	15 dB typ	15 dB typ	14 dB typ	10 dB typ	10 dB typ
	12 dB min	12 dB min	12 dB min	8 dB min	8 dB min
Output Return Loss	15 dB typ	15 dB typ	14 dB typ	10 dB typ	10 dB typ
	12 dB min	12 dB min	12 dB min	8 dB min	8 dB min
1dB GCP*	18 dBm typ	18 dBm typ	18 dBm typ	18 dBm typ	18 dBm typ
	15 dBm min	15 dBm min	15 dBm min	15 dBm min	15 dBm min
IP3*	27	27	27	27	27
Noise Figure*	12	12	12	12	12

1dB Gain Compression Point (1dB GCP) is in relation to output power.
Flatness measured at Max gain setting
** At max gain setting*

BROADCAST

MARINE OIL & GAS

SNG & VSAT

SATELLITE TELEPORT

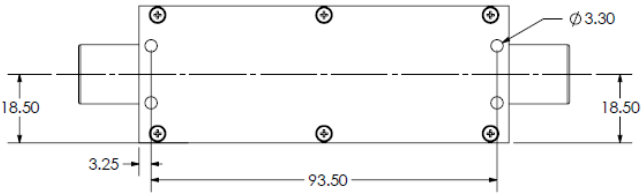
L-band Variable Gain Amplifier

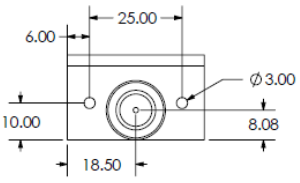
Environmental	
Operating Temperature	0˚C to 55˚C
Storage Temperature	-20˚C to +75 ˚C
Location	Indoor use Only
Humidity	85 % non-condensing
Altitude	10,000 ft above mean sea level

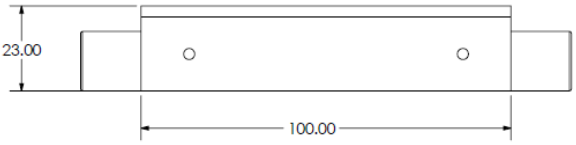
Max Operating Parameters		
Input RF Power		16 dBm (40mW)
Voltage	RF ports	35V
	DC bias	30V
DC Current		2A Max
DC Consumption		200 mA Max 160 mA Typ

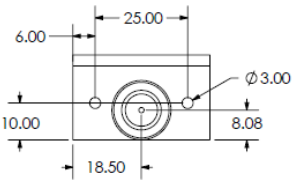
! Operation beyond these limits may cause instantaneous and permanent damage.

Mechanical Dimensions









Gain Settings							
Switch settings	1	2	3	4	5	6	Other features
Attenuation	16	8	4	2	1	n/a	Attenuation settings when the selected switch is at ON state
Max Gain	1	1	1	1	1	n/a	Max gain (0dB attenuation setting)
Min gain	0	0	0	0	0	n/a	Min gain (31dB attenuation setting)

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Feature set for alternative L-Band Variable Gain Block Amplifiers

Model Number	Bias Option	Frequency vs. Gain	Gain Options (dB)	Other Features
3025	External	Flat	0 to 30	DC block and 10MHz block
3026	External	Flat	0 to 30	10MHz and DC pass
3027	External	Flat	0 to 30	10MHz pass and DC block
3028	External	Flat	0 to 30	DC pass and 10MHz block
3029	In-line	Flat	0 to 30	10MHz and DC pass
3030	In-line	Flat	0 to 30	DC pass and 10MHz block

** Custom designs available on request*

PSU12F125-9701

PSU120V02-9702

PSU48F150-9703

PSU range available

Model Number	Input	Output	Other
PSU12F125-9701-SLP	100-240V (AC), 0.6A	12V (DC), 1.25A	Solder pin output
PSU12F125-9701-ML2	100-240V (AC), 0.6A	12V (DC), 1.25A	Female 3 pin Molex socket
PSU120V02-9702-SLP	100-240V (AC), 1.2A	12V to 24V (DC), 5A	Solder pin output
PSU120V02-9702-ML2	100-240V (AC), 1.2A	12V to 24V(DC) 5A	Female 3 pin Molex socket
PSU48F150-9703-SLP	100-240V (AC), 2.5A	48V (DC), 3.13A	Solder pin output
PSU48F150-9703-ML2	100-240V (AC), 2.5A	48V (DC), 3.13A	Female 3 pin Molex socket

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