



A-VGAL1-3029

RF Engineering & Custom Build

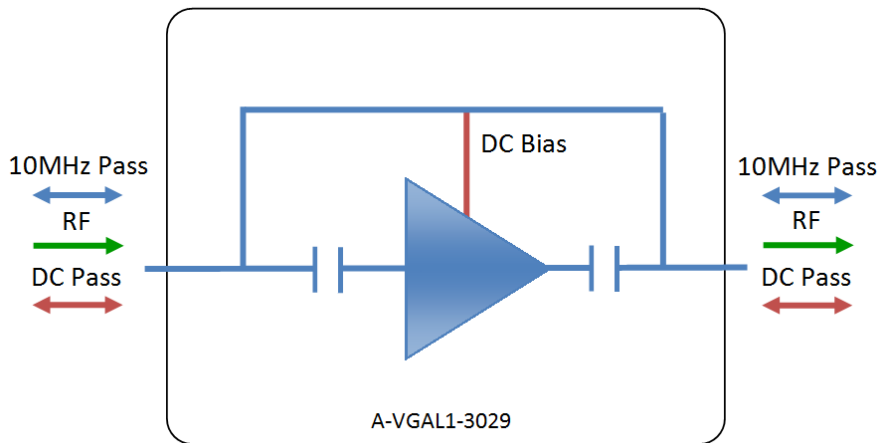
L-band Variable Gain Amplifier



The 3029 Variable gain amplifier offer flat frequency versus gain characteristics over 850 to 2150MHz, ports are DC and 10MHz pass. Gain selectable from 0 to 30dB Gain. Requires 8-24V on either port for inline 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-VGAL-3029-xxxx | S5S5 | N5N5 | B5B5 | B7B7 | F7F7 |
|-----------------------|-----------------|--------------------|-----------------|-----------------|--------------------|
| Frequency Range (MHz) | 850-2150 | 850-2150 | 850-2150 | 850-2150 | 850-2150 |
| RF Connectors | 50 Ω SMA | 50 Ω N-Type | 50 Ω BNC | 75 Ω BNC | 75 Ω 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 | 12 dB typ | 10 dB typ | 10 dB typ |
| | 10 dB min | 10 dB min | 10 dB min | 8 dB min | 8 dB min |
| Output Return Loss | 15 dB typ | 15 dB typ | 12 dB typ | 10 dB typ | 10 dB typ |
| | 10 dB min | 10 dB min | 10 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

BROADCAST



MARINE OIL & GAS



SNG & VSAT



SATELLITE TELEPORT





L-band Variable Gain Amplifier

Environmental

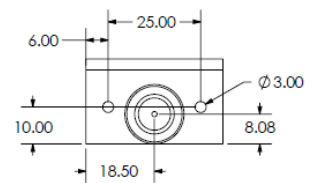
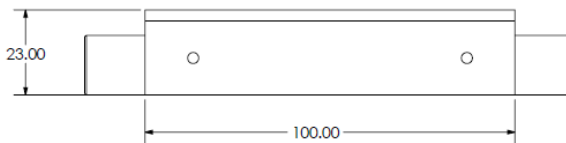
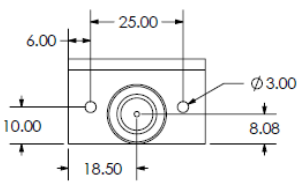
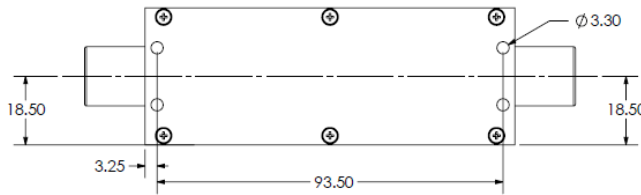
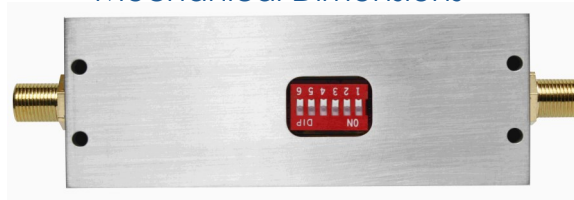
| | |
|-----------------------|--------------------------------|
| Operating Temperature | 0°C to 55°C |
| Storage Temperature | -20°C to +75 °C |
| Location | Indoor use Only |
| Humidity | 85 % non-condensing |
| Altitude | 10,000 ft above mean sea level |

Max Operating Parameters

| | | |
|----------------|-----------------------|-----|
| Input RF Power | 16 dBm (40mW) | |
| Voltage | RF ports | 35V |
| | DC bias | 30V |
| DC 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 | N/A | 1 | 2 | 4 | 8 | 16 | 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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L-band Variable Gain Amplifier

Feature set for alternative L-Band Variable Gain Block Amplifiers

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