



# VGLCDLA30RPDC

## Technical Product Data



### Features

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• <b>Variable Gain Amplifier</b><br/>0 ≤ Gain ≤ 30dB</li> <li>• <b>Excellent SWR Throughout Dynamic Range</b><br/>SWR ≤ 1.8:1 Max, SWR ≤ 1.5:1 Typical</li> <li>• <b>Excellent 1dB Compression</b><br/>Minimum 5dBm,</li> <li>• <b>Push Button Controls</b><br/>1dB Increments</li> </ul> | <ul style="list-style-type: none"> <li><b>Extremely Flat Group Delay</b><br/>Less than 1ns Variation</li> <li><b>Very Low Noise Figure</b><br/>Typical 1.7dB</li> <li><b>Excellent 3<sup>rd</sup> Order Intercept</b><br/>13dBm</li> <li><b>Rohs Compliant</b></li> </ul> |
|--|---|

### Description

The VGLCDLA30RPDC is a GPS Variable Gain Line Amplifier featuring a variable gain range from 0 to 30dB with an LCD display and push button controls in 1dB increments. The frequency response covers the GPS L1/L2/L5, Galileo and GLONASS bands with excellent flatness throughout the attenuation range. The easy to read LCD display allows users to read the exact gain at any time and easily adjust the gain in 1dB increments to ensure precise control of the signal strength at all times. In the normal configuration, the RF output passes DC from the connected GPS receiver through the amplifier to the antenna, allowing the GPS receiver to power both the antenna and the amplifier.

## Electrical Specifications, T<sub>A</sub> = 25<sup>0</sup>C

| Parameter                       | Conditions  | Min | Typ | Max   | Units |
|---------------------------------|---|-----|-----|-------|-------|
| Freq. Range                     | Ant – J1  | 1.1 |     | 1.7   | GHz   |
| In/Out Impedance                | Ant, J1   |     | 50  |       | Ω     |
| Gain, Max Setting               | Ant – J1  |     |     | 30    | dB    |
| Gain, Min Setting               | Ant – J1  | 0   |     |       | dB    |
| Input VSWR                      | J1 - 50Ω, across full gain range                  |     |     | 1.8:1 | -     |
| Output VSWR                     | Ant - 50Ω, across full gain range                 |     |     | 1.8:1 | -     |
| Gain Flatness                   | L1 - L2  , Ant – J1, from 0dB gain to 20+ dB gain |     |     | 2.0   | dB    |
| Reverse Isolation               | J1 – Ant, Max Gain setting                        | 50  |     |       | dB    |
| 1dB Compression                 | Ant – J1  | 5   |     |       | dBm   |
| 3 <sup>rd</sup> Order Intercept | Ant – J1, Referred to Output                      | 13  |     |       | dBm   |
| DC Input Voltage                | DC Input on J1                                    | 2.8 |     | 15    | Vdc   |
| DC Current <sup>(1)</sup>       | Amplifier Current Draw, All ports - 50Ω           |     | 15  |       | mA    |

(1). Current draw on J1 port in the non-networked configuration.

## Available Options

| Network Power Supply                  |                               |                          |
|---------------------------------------|-------------------------------|--------------------------|
| Source Voltage Options                | VOLTAGE INPUT                 | STYLE                    |
|                                       | 110VAC                        | Transformer (Wall Mount) |
|                                       | 220 VAC                       | Transformer (Wall Mount) |
|                                       | 240 VAC (United Kingdom)      | Transformer (Wall Mount) |
|                                       | Customer Supplied DC 8-32 VDC | Military Style Connector |
| Output Voltage Options <sup>(1)</sup> | 2.8 - 15 VDC                  | 500mA Maximum Current    |
| Pass/Block DC Options                 |                               |                          |
| Pass DC <sup>(1)</sup>                | All Ports Pass DC             |                          |
| DC Blocked <sup>(1)</sup>             | Ant is DC blocked, Pass DC J1 |                          |
| RF Connector Options                  |                               |                          |
| Connector Options                     | CONNECTOR STYLE               | CHARGE                   |
|                                       | Type N                        | NC                       |
|                                       | Type SMA                      | NC                       |
|                                       | Type TNC                      | NC                       |
|                                       | Type BNC                      | NC                       |

## Mechanical

### Dimensions:

Height: 1.3"

Length (not including connectors) Body: 2.5"  
Base Plate: 3.25"

Width: 2.5"

Weight: 9.8 oz. (272 grams)

Operating Temp. Range: -40° to + 75°C

## Part Number

**N VGLCDLA30 PDC- N / 5 / 110**

Network Option:

**N** = Network Option; **Blank**: No Network

DC Options:

**DCB** = Ant. DC Blocked; **PDC** = Pass DC

Connector Options:

**N** = N type; **S** = SMA; **T** = TNC; **B** = BNC

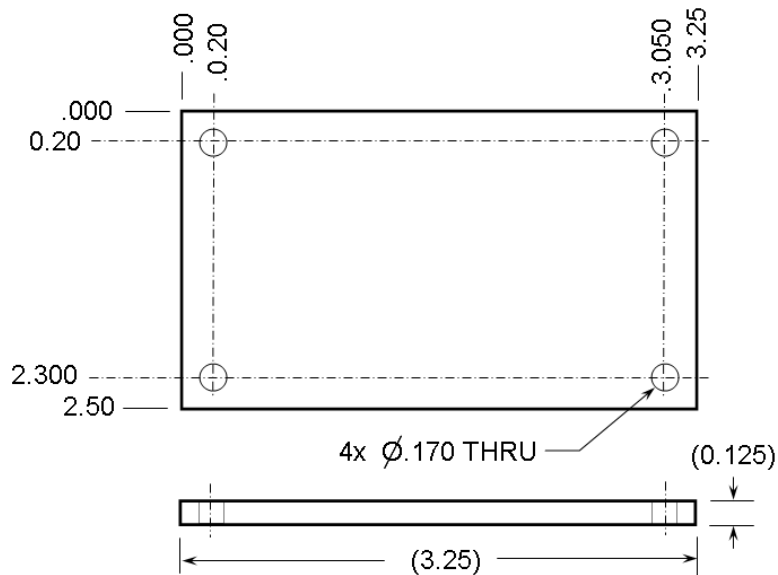
DC Output Voltage:

**3.3, 5, 7.5, 9, 12, 15, CXX** (Custom: "XX" denotes the desired V)

Source Voltage:

**110** -Transformer, **220** – Transformer, **240** – Transformer, **MC** – Military Conn. (User supplies DC Voltage)

## Mechanical



Notes:

1. Material: 6061-T6 Aluminum, 0.125 Thick
2. Finish: Electroless Nickel Plated, 0.0001 – 0.0003 Max. Thickness

## Mounting Base Plate