

# LINEAR WIDEBAND POWER AMPLIFIER

**Model – AA.50030G3038AC**

## General Description:

Elite RF's AA Series amplifier is a wideband power amplifier designed for CW/pulsed signals fabricated on GaN on SiC process and can operate up to **30 GHz**. These amplifiers offer high power density, low thermal resistance, and wideband performance. They can be widely used for military and commercial applications.

Like all Elite RF amplifiers, this product comes with an industry leading warranty.



## Features

Wide Freq. Range  
High Output Power  
High Gain  
High Reverse Isolation

## Protections

Thermal Overload  
Over Voltage

## ELECTRICAL SPECIFICATIONS

| Parameter                                  | Symbol     | Min  | Typ   | Max | Unit  |
|--|------------|------|-------|-----|-------|
| Frequency Range                            | BW         | 0.50 |       | 30  | GHz   |
| Output Power CW                            | Psat       |      | 1     |     | Watt  |
| Output Power at 1 dB Compression           | P1dB       |      | 0.5   |     | Watt  |
| Small Signal Gain                          | Gp         |      | 38    |     | dB    |
| Gain Flatness                              | Delta Gp 1 |      | +/- 2 |     | dB    |
| Input VSWR                                 | S11        |      | 2:1   |     | Ratio |
| IMD @ .5 GHz @ 1 watt/tone / 1 MHz spacing | IP3        |      | 35    |     | dBm   |
| Harmonics                                  | H          |      | -20   |     | dBc   |
| Spurious Signals                           | Spur       |      | -60   |     | dBc   |
| Operating Voltage                          | Opv        | 100  | 120   | 240 | VAC   |
| AC Power at 1 watts                        | Pd         |      | 10    |     | Watt  |
| Class of Operation                         | C          |      | A     |     | Class |
| Noise Figure                               | NF         |      | 4.0   |     | dB    |
| Large Signal Gain                          | Lsg        |      | 37    |     | dB    |
| Max Load VSWR @ 1 Watts                    | ML         |      | 10:1  |     | Ratio |

## ENVIRONMENTAL CHARACTERISTICS

| Parameter                          | Symbol | Min | Typ | Max    | Unit                   |
|------------------------------------|--------|-----|-----|--------|------------------------|
| Operating Case Temperature         | Tc     | 0   |     | +50    | Deg. C                 |
| Storage Temperature                | Tstg   | -40 |     | +85    | Deg. C                 |
| Relative Humidity (non-condensing) | RH     |     |     | 95     | %                      |
| Altitude                           | ALT    |     |     | 10,000 | Feet                   |
| Vibration/Shock                    | VI /SH |     |     |        | Normal Truck Transport |

## MECHANICAL CHARACTERISTICS

| Parameter         | Symbol  | Min | Typ                | Max | Unit   |
|-------------------|---------|-----|--------------------|-----|--------|
| Dimensions        | Dim     |     | 19 x 15 x 3.5      |     | Inches |
| Weight            | Wt.     |     | 25                 |     | lbs.   |
| Connectors In/Out | RF Conn |     | N-Type             |     | -      |
| Cooling           | Th      |     | Forced air cooling |     | -      |

## OPTIONS

| Parameter   | Add suffix to part number |
|---|---------------------------|
| Heat sink and fans                                | N/A                       |
| Isolator with forward and reverse voltage outputs | N/A                       |
| TTL Input Trigger                                 | N/A                       |

## Mechanical Drawings

