

# LINEAR WIDEBAND POWER AMPLIFIER

**Model – MB2.0018G364824**

## General Description:

Elite RF's MB Series amplifier is a wideband power amplifier designed for CW signals fabricated on GaN on SiC process and can operate up to **18 GHz**. These amplifiers offer high power density, decade bandwidth performance, 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 | Indicator options | Protections |
|----------|-------------------|-------------|
|----------|-------------------|-------------|

|  |            |                  |
|--|------------|------------------|
| Wide Freq. Range                         | DC Power   | Thermal Overload |
| High Output Power                        | Temp Fault | Over Voltage     |
| High Gain                                |            | Reverse Polarity |
| High Reverse Isolation                   |            |                  |
| Built-in Protection                      |            |                  |
| Enable/Disable input (ground to disable) |            |                  |

## ELECTRICAL SPECIFICATIONS

| Parameter                                  | Symbol     | Min  | Typ   | Max   | Unit  |
|--|------------|------|-------|-------|-------|
| Frequency Range                            | BW         | 2000 |       | 18000 | MHz   |
| Output Power CW                            | Psat       |      | 4     |       | Watt  |
| Output Power at 1 dB Compression           | P1dB       |      | 2     |       | Watt  |
| Small Signal Gain                          | Gp         |      | 52    |       | dB    |
| Gain Flatness                              | Delta Gp 1 |      | +/- 3 |       | dB    |
| Input VSWR                                 | S11        |      | 2:1   |       | Ratio |
| IMD @ 2 GHz @ .1 watt/tone / 1 MHz spacing | IP3        |      | 38    |       | dBm   |
| Harmonics                                  | H          |      | -20   |       | dBc   |
| Spurious Signals                           | Spur       |      | -60   |       | dBc   |
| Operating Voltage                          | VDC        | 22   | 24    | 24    | VDC   |
| Current at 2 watts "0.2 amps idle current" | Current    |      | 1.0   |       | Amps  |
| Class of Operation                         | C          |      | AB    |       | Class |
| Noise Figure                               | NF         |      | 5     |       | dB    |
| Large Signal Gain                          | Lsg        |      | 48    |       | dB    |
| Max Load VSWR @ 2 Watts                    | ML         |      | 6:1   |       | Ratio |

## ENVIRONMENTAL CHARACTERISTICS

| Parameter                          | Symbol | Min | Typ | Max    | Unit                   |
|------------------------------------|--------|-----|-----|--------|------------------------|
| Operating Case Temperature         | Tc     | -20 |     | +60    | 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 |

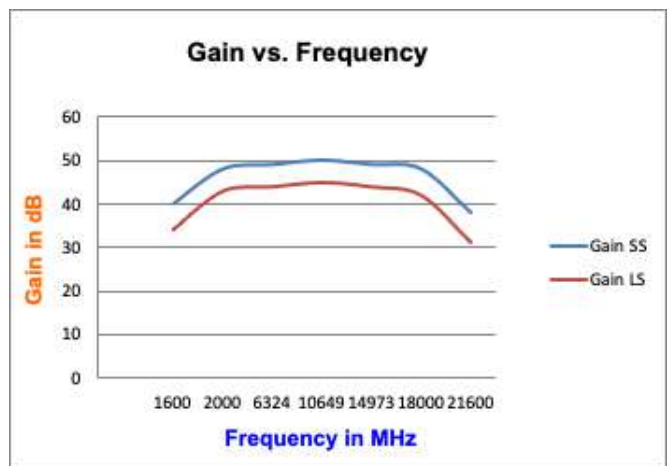
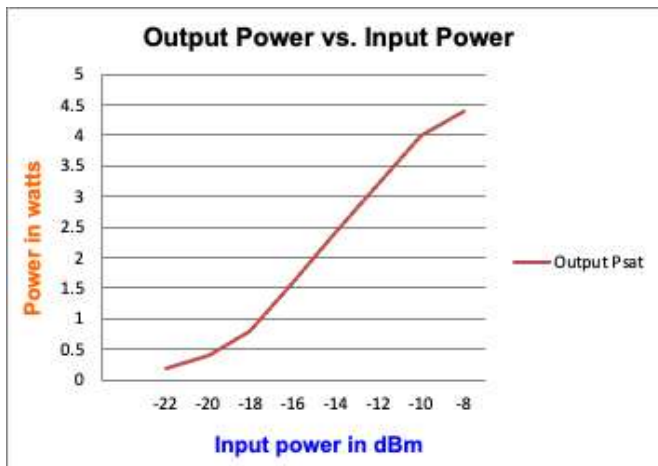
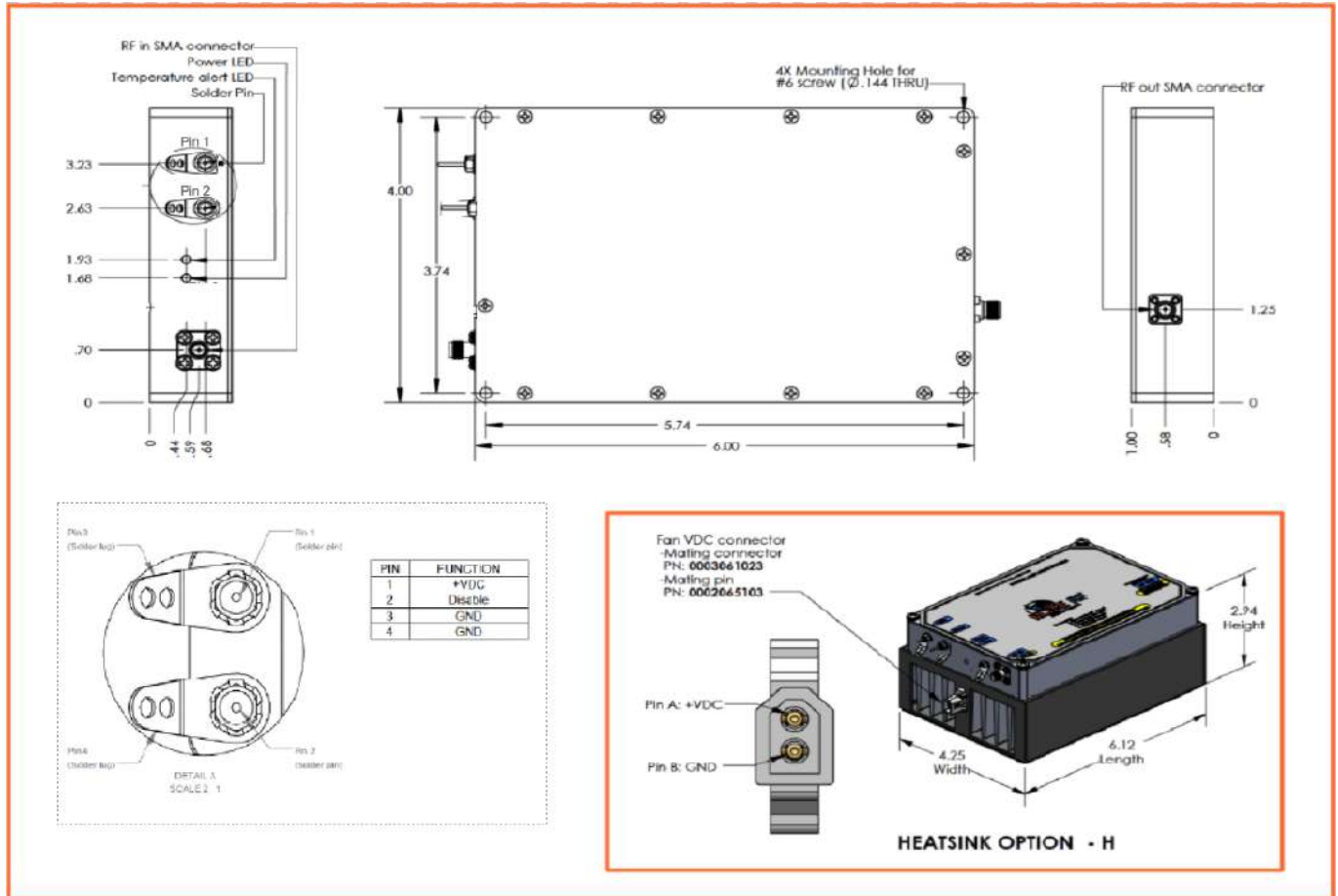
## MECHANICAL CHARACTERISTICS

| Parameter         | Symbol  | Min | Typ                | Max | Unit   |
|-------------------|---------|-----|--------------------|-----|--------|
| Dimensions        | Dim     |     | 6.0 x 4.0 x 1.0    |     | Inches |
| Weight            | Wt.     |     | 1                  |     | lbs.   |
| Connectors In/Out | RF Conn |     | SMA/SMA            |     | -      |
| Cooling           | Th      |     | Heat sink required |     | -      |

## OPTIONS

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

# Mechanical Drawings



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**Rev 3 04/08/2023:**  
 Specifications subject to change,  
 consult sales for latest information

**Product Compliance:**  
 ECCN: 3A001.b.2.a.4  
 USHTS: 8542330001