

LINEAR WIDEBAND POWER AMPLIFIER

Model – MB.506.0G434850



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 **6.0 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 **5-year 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	500		6000	MHz
Output Power CW	Psat		20		Watt
Output Power at 1 dB Compression	P1dB		10		Watt
Small Signal Gain	Gp		50		dB
Gain Flatness	Delta Gp 1		+/- 3		dB
Input VSWR	S11		2:1		Ratio
IMD @ 1 watt/tone @ 1 MHz spacing	IP3		49		dBm
Harmonics	H		-20		dBc
Spurious Signals	Spur		-60		dBc
Operating Voltage	VDC	48	50	51	VDC
Current at 20 watts	Current		2		Amps
Class of Operation	C		AB		Class
Noise Figure	NF		5		dB
Large Signal Gain	Lsg		48		dB
Max Load VSWR @ 20 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	

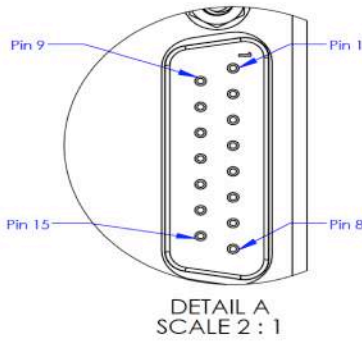
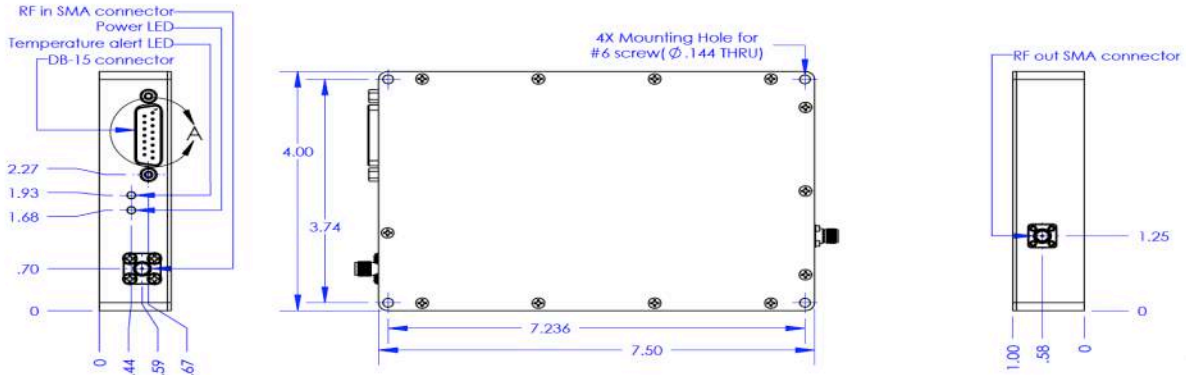
MECHANICAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Dimensions	Dim		7.5 x 4.0 x 1.0		Inches
Weight	Wt.		1		lbs.
Connectors In/Out	RF Conn		SMA/SMA		-
Cooling	Th		Heat sink required		-

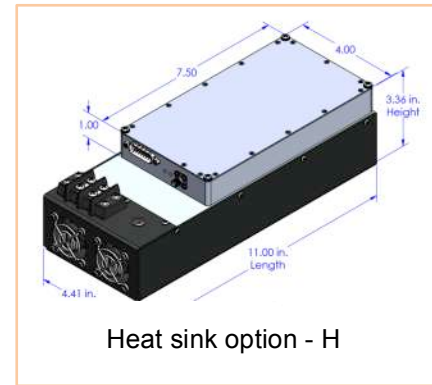
OPTIONS

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



PIN	FUNCTION
1	+50 VDC
2	+50 VDC
3	+50 VDC
4	Disable
5	NC
6	Ground
7	Ground
8	Ground
9	+50 VDC
10	+50 VDC
11	NC
12	NC
13	Ground
14	Ground
15	Ground



Output Power vs. Input Power



Gain vs. Frequency

