LINEAR WIDEBAND POWER AMPLIFIER

Model – MB.506.0G434850

20 watts 500 to 6000 MHz 50 VDC

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 **3-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		

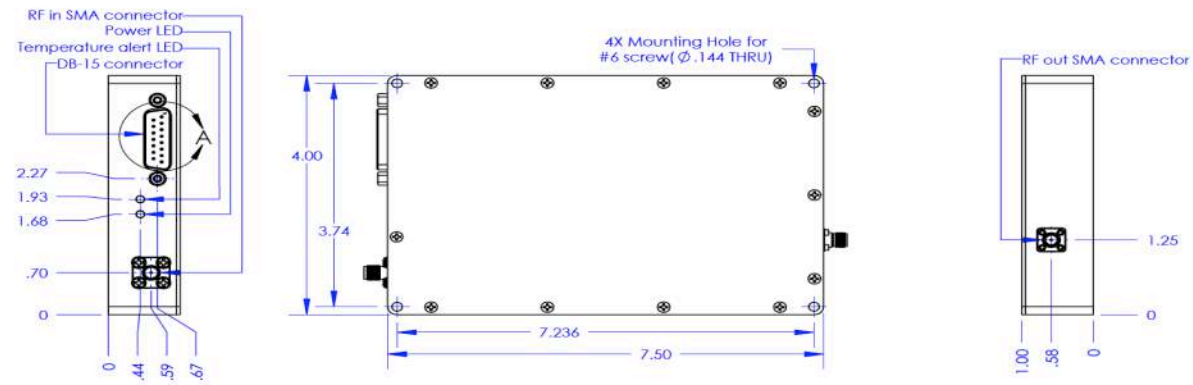
MECHANICAL CHARACTERISTICS

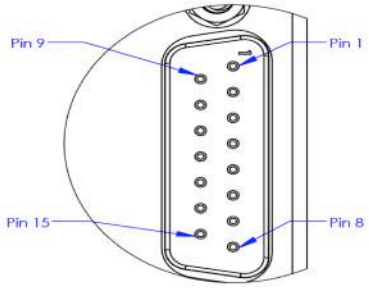
Parameter	Symbol	Min	Typ	Max	Unit
Dimensions	Dim		7.5 x 4.0 x 1.0		Inches
Weight	Wt.		1		lbs.
Connectors In/Out	RF Conn		SMA/SMA		-
Cooling	Th		Heat sink required		-

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

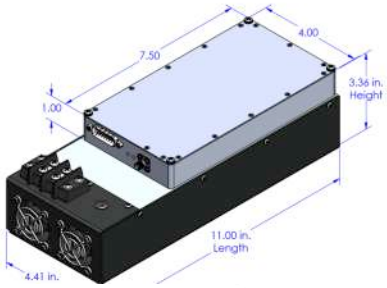
Mechanical Drawings



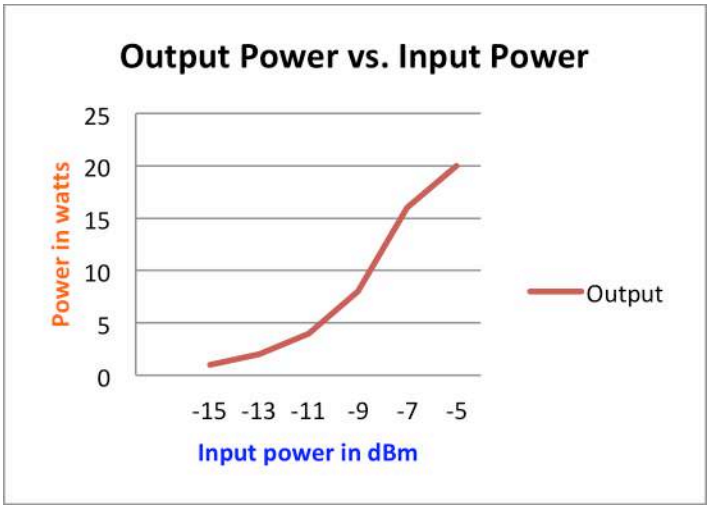


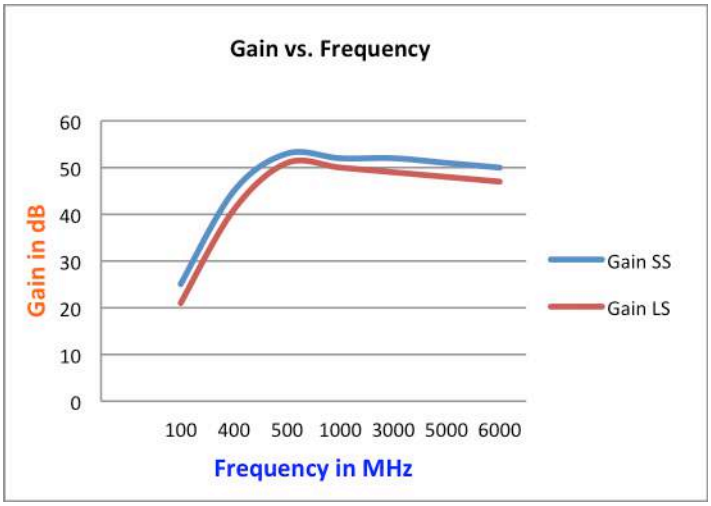
DETAIL A
SCALE 2 : 1

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



Heat sink option - H





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Rev 3 08/23/2023:
Specifications subject to change, consult sales for latest information