HD31090
SOLID STATE HIGH POWER AMPLIFIER

PRELIMINARY

FEATURES

Class A linear GaAsFET design
Designed for proprietary X-Band applications
Suitable for all modulations standards
Built-in protection circuits
High reliability and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	8.175 - 8.250 GHz	
Power Output	100 Watt Min	CW
Power Gain	50 dB Min	
Power Gain Flatness	2.0 dB p-p Max	
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	>30 dBc Typ	41dBm/Tone, Δ = 1MHz
Harmonics	>30 dBc	At rated Pout
Non Harmonics Spurious	>60 dBc	
Operating Voltage	10 VDC Nom	
Current Consumption	36 Amp Max	At rated Pout
Max Input Power	+8 dBm Max	Without damage
Load VSWR Protection	∞ : 1	Output Isolator

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non Condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	220 X 146 X 27 mm	Excluding WG
Weight	TBD	
RF Connectors In/Out	SMA/WR90	Flange UG-136B/U
DC Power / Interface Connector	7-Pin Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

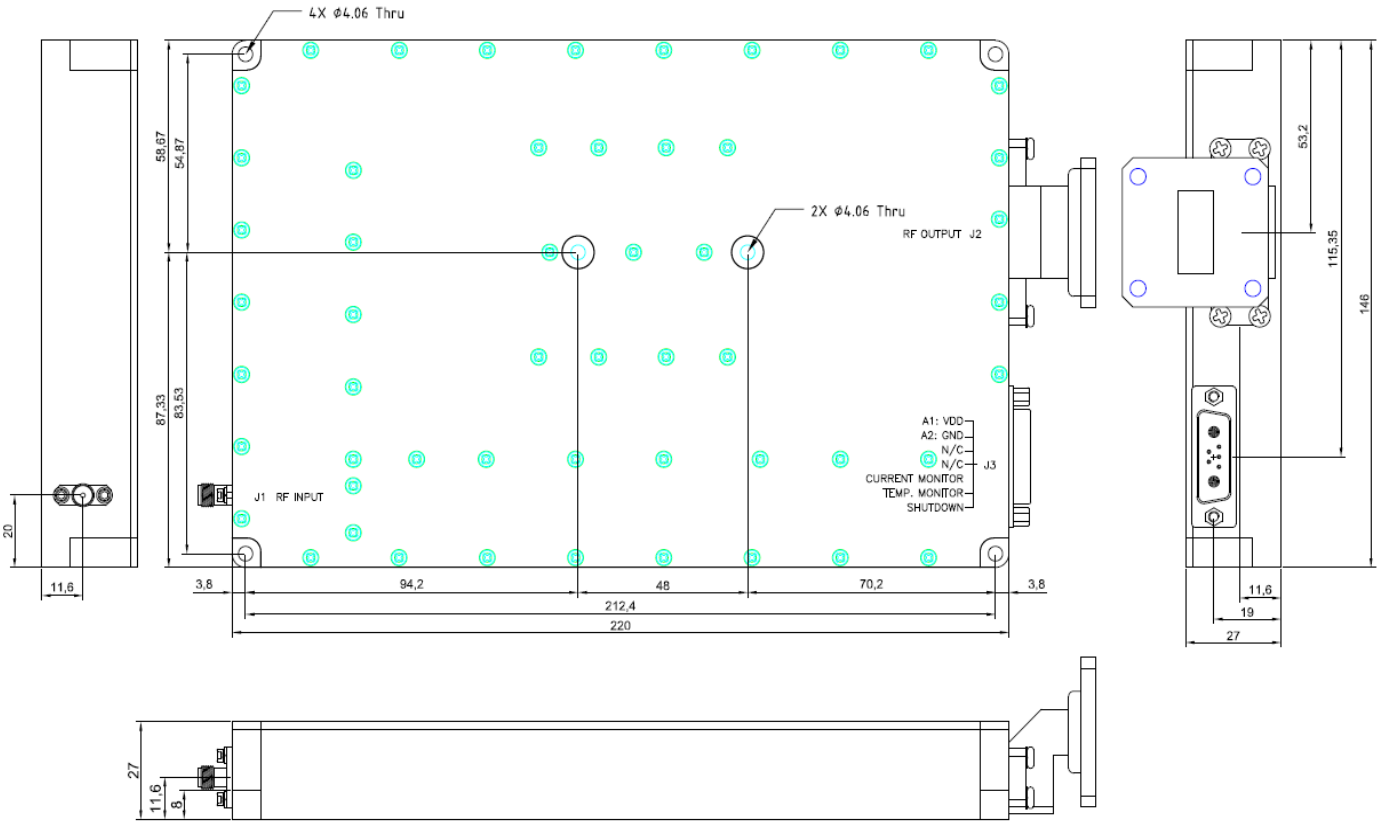
Pin	Function	Description
A1	VDD	10 VDC
A2	GND	Ground
1	FWD	(Optional)
2	REV	(Optional)
3	CURRENT SENSOR	I_D@10mV/100mA Typ
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	TTL

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OUTLINE DRAWING



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