

Description

The Model INS3133 is a high power, class AB solid state amplifier which utilizes the latest GaN Technology to offer broadband performance from 500 to 2500MHz. Inspower’s ISO9001 quality management system assures consistent performance and highest reliability.

Product Features

- 50Ω RF impedance, Fully Integrated Matching
- 25W Output
- Single Supply Operation: Nominally 28V
- Built-in monitoring functions
- High reliability and ruggedness

Electrical Specifications @ +28.0VDC, 25°C, 50Ω System

Symbol	Parameter	Unit	Min.	Typ.	Max.
BW	Operating Frequency	MHz	500		2500
P _{SAT}	Power Output Saturated	Watt	25	30	
P _{1dB}	Power Output P1dB	Watt		20	
G _{1dB}	Power Gain	dB	44		
P _{IN}	Input Power for Rated P _{SAT}	dBm		0	3
ΔG _P	Power Gain Flatness	dB			±3.0
S11	Input Return Loss	dB			-10
NF	Noise Figure	dB			10
IP ₃	Third Order Intercept Point 2-Tone@ 30dBm/Tone, 100KHz Spacing	dBm	+45		
H	Harmonics @Pout= 20W	dB		-25	
Spur	Spurious Signal	dBc		-70	-60
V _{DC}	Operation Voltage	Volt	26.0	28.0	30.0
I _{DD}	Current Consumption @Pout=25W	Amp			3.0
I _{EQ}	Quiescent Current	Amp		1.5	
I _{SQ}	Current Consumption @Shutdown	mA		100	
T _{ON/OFF}	Switching Time @ 1KHz TTL, P _{IN} =0dBm	uSec		2	5

INS3133

500-2500MHz 25W Broadband GaN Power Amplifier

Mechanical Specification

Parameters	Value	Limit	Unit
Dimension (W × D × H)	152.4 * 76.2 * 25.4 (6 * 3 * 1)	-	mm (inch)
RF Connector Input/output	SMA Female	-	-
DC Interface Connector	D-Sub 9pin Male	-	-
Weight	500	Max	gram
Cooling	External Heat-sink	-	-

Environmental Characteristics

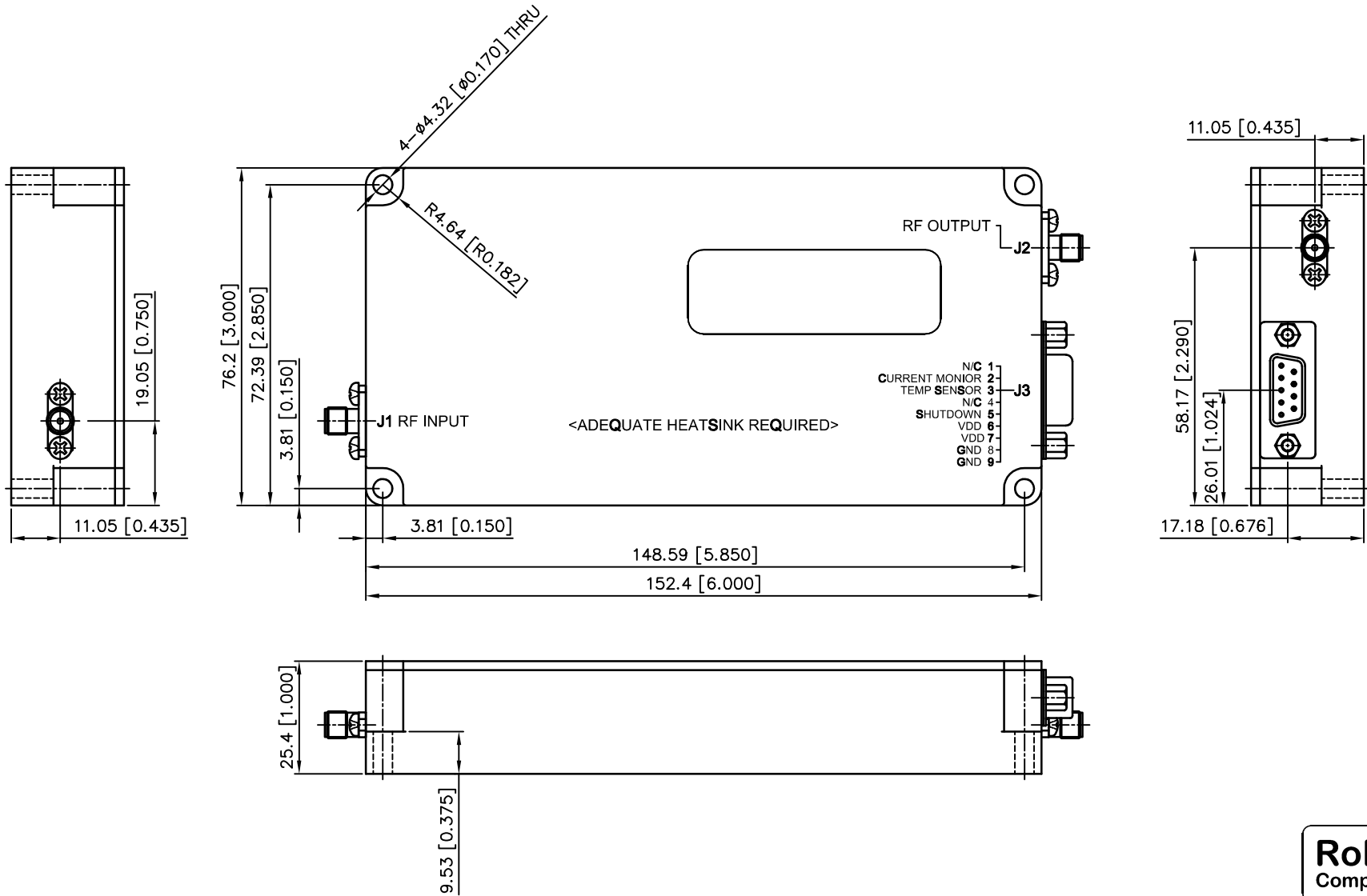
Parameters	Specifications	Remark
Operating Case Temperature Range	-40°C to +80°C	
Storage Temperature	-40°C to +85°C	
Relative Humidity non-condensing	95%	

Protection

Item	Specifications for Activation	Remark
Input Overdrive	+10dBm Max	
Load VSWR	∞: 1	
Thermal Degradation	85°C Min	

I/O Interface (D-sub 9pin Male)

Pin No	Pin Description	Specifications	Remark
1	NC	Not Connected	
2	Current Monitor	Analog Voltage Relative to IDD @ 50mV/100mA	
3	Temp Monitor	Vout=10mV/°C×Temp+500mV	
4	NC	Not Connected	
5	Shutdown	Enable: TTL "0" or Open Disable: TTL "1" = 3.3-5V	
6	VDD	+28VDC	
7	VDD	+28VDC	
8	GND	Ground	
9	GND	Ground	



APPROVED	MATERIAL		PART NAME	
	FINISH		OUTSIDE DRAWING	
CHECKED	THIRD ANGLE PROJECTION		DWG NO.	SHEET
	SIZE		UNIT:	Q'TY:
DESIGNED	MODEL/TITLE		SCALE: CAD=1/1	
	INS3133		PLOT=N/S	

