

INS2130

1500-1700MHz 100W Power Amplifier



Description

The Model INS2130 is designed for band specific applications. This high power, class AB solid state amplifier utilizes LDMOS power devices to offer excellent efficiency and linearity characteristics from 1500 to 1700MHz. Inspower's ISO9001 quality management system assure consistent performance and highest reliability.

Product Features

- 50Ω RF impedance, Fully Integrated Matching
- 100W Output at P1
- Single Supply Operation : Nominally 27V
- Built-in monitoring functions
- High reliability and ruggedness

Electrical Specifications

Symbol	Parameter	Unit	Min.	Typ.	Max.
BW	Frequency of Operation	MHz	1500		1700
Psat	Pout @ Psat, CW	dBm	50		
G	Small Signal Gain @ 1900MHz	dB	49.5	50	50.5
Gain Flatness	Over 100MHz, Pout=P1dB	dB			±1.0
S11	Input VSWR				1.5:1
Spur	Spurious Signal	dBc		-70	-60
H	Harmonics @P1dB	dBc		-45	
VDC	Operation Voltage	V	24.0	27.0	28.0
ID	Current Consumption @ Pout=100W	A		10	12.0

Mechanical Specification

Parameters	Value	Unit
Dimensions (W x D x H)	140 * 125 * 25	mm
RF Connector Input/output	SMA Female	
DC Interface Connector	D-Sub 3W3 Male	
I/O Connector	D-Sub 9Pin Male	
Weight	1	Kg
Cooling	External Heat-Sink	

Environmental Characteristics

Parameters	Specifications	Remark
Operating Temperature Range	-20°C to +60°C Ambient	
Storage Temperature Range	-40°C to +85°C	
Operating Humidity	95% Non-Condensing	
Vibration	Bellcore TR-NWT-000063 (1m/s*s 10~150Hz)/2G	

Protection

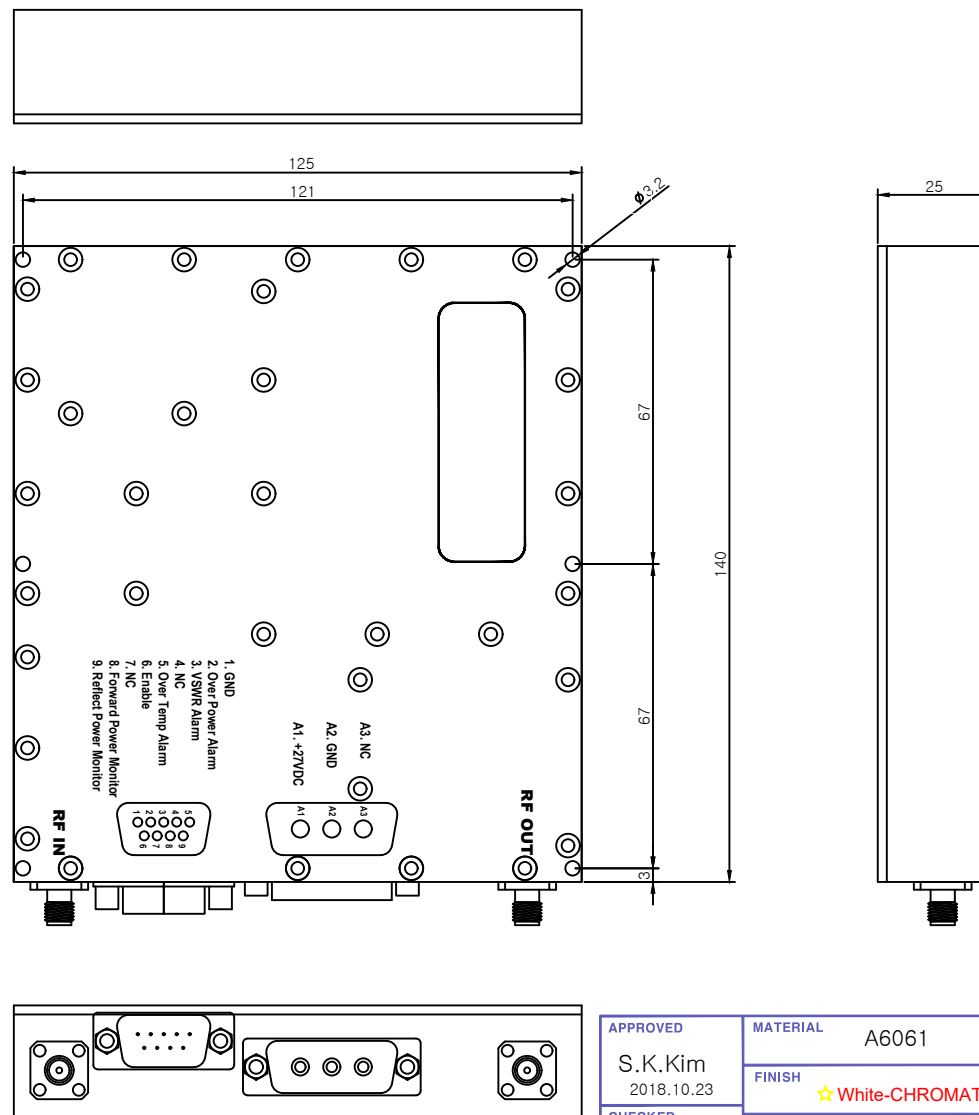
Item	Specifications for Activation	Remark
Output Protection	Mismatch Protected with Isolator	
Protection Function	High VSWR shutdown, High Temp Shutdown	

DC Power Connector (D-Sub 3W3 Male)

Pin No	Function	Specifications	Remark
A1	VCC	+27VDC	
A2	GND	GND	
A3	NC	Not Connect	

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

Pin No	Pin Description	Specifications
1	GND	GND
2	Over Power Alarm & Shutdown	Not used.
3	VSWR Fail Alarm & Shutdown	High +5V TTL Output @VSWR 3:1 *Shutdown Start level: Over reflected power 25W **Shutdown Time: 2sec after antenna cable disconnect at 100W
4	Do not connect	Manufacturer Use (Temperature monitor)
5	Over temperature alarm & shutdown	High +5V TTL Output @Case Temperature 85°C±5.0 Auto Restart @ Case Temperature 65°C±5.0
6	Enable	Enable : Active low(GND) Disable: +5V High or Open status *Current is 1mA **Method is pull-up
7	Do not connect	Reserved
8	Forward Power Monitor	4V±0.1V@50dBm, 0.1V±0.01/dB *Detector is AD8362 (RMS Detector) **Power Monitor Range (1V~4V)
9	Reverse Power Monitor	0.2V~1V@10W~100W



APPROVED	MATERIAL	PART NAME		
S.K.Kim 2018.10.23	A6061	OUTSIDE DRAWING		
CHECKED	FINISH	DWG NO.		SHEET
	☆ White-CHROMATE(Cr ³⁺)			1 OF 1
	THIRD ANGLE PROJECTION	SIZE	UNIT:	SCALE:
		A3	mm	CAD=1/1 PLOT=N/S
DESIGNED	MODEL/TITLE		Q'TY:	
K.M.Jang 2021.08.23	INS INS2091		INSPOWER RF Amplifiers	