

Description

The Model INS3217 is a high power, class AB solid state amplifier which utilizes the latest GaN Technology to offer broadband performance from 400 to 2500MHz. Inspower's ISO9001 quality management system assures consistent performance and highest reliability.

Product Features

- 50Ω RF impedance, Fully Integrated Matching
- 100W 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	400		2500
P _{SAT}	Power Output Saturated	Watt	100	125	
P _{1dB}	Power Output P1dB	Watt		60	
G _{1dB}	Power Gain	dB	50		
P _{IN}	Input Power for Rated P _{SAT}	dBm		0	3
ΔG _{SS}	Small Signal Gain Flatness	dB			±3.0
ΔG _P	Power Gain Flatness	dB			±2.0
S ₁₁	Input Return Loss	dB			-10
IP ₃	Third Order Intercept Point 2-Tone@37dBm/Tone, 1MHz Spacing	dBm		+50	
H	Harmonics @Pout=100W	dB		-25	
Spur	Spurious Signal	dBc		-70	-60
V _{DC}	Operation Voltage	Volt	26.0	28.0	30.0
I _{DD}	Current Consumption @Pout=100W	Amp		11.5	14
I _{DQ}	Quiescent Current	Amp		2.8	3.5
I _{SQ}	Current Consumption @Shutdown	mA		100	200
T _{ON/OFF}	Switching Time	uSec		2	5

Mechanical Specification

Parameters	Value	Unit
Dimension (W × D × H)	235 × 90 × 27	mm
RF Connector Input/output	SMA Female	-
DC Interface Connector	D-Sub 9pin Male	-
Weight	1.1	Kg
Cooling	External Heat-sink	-

Environmental Characteristics

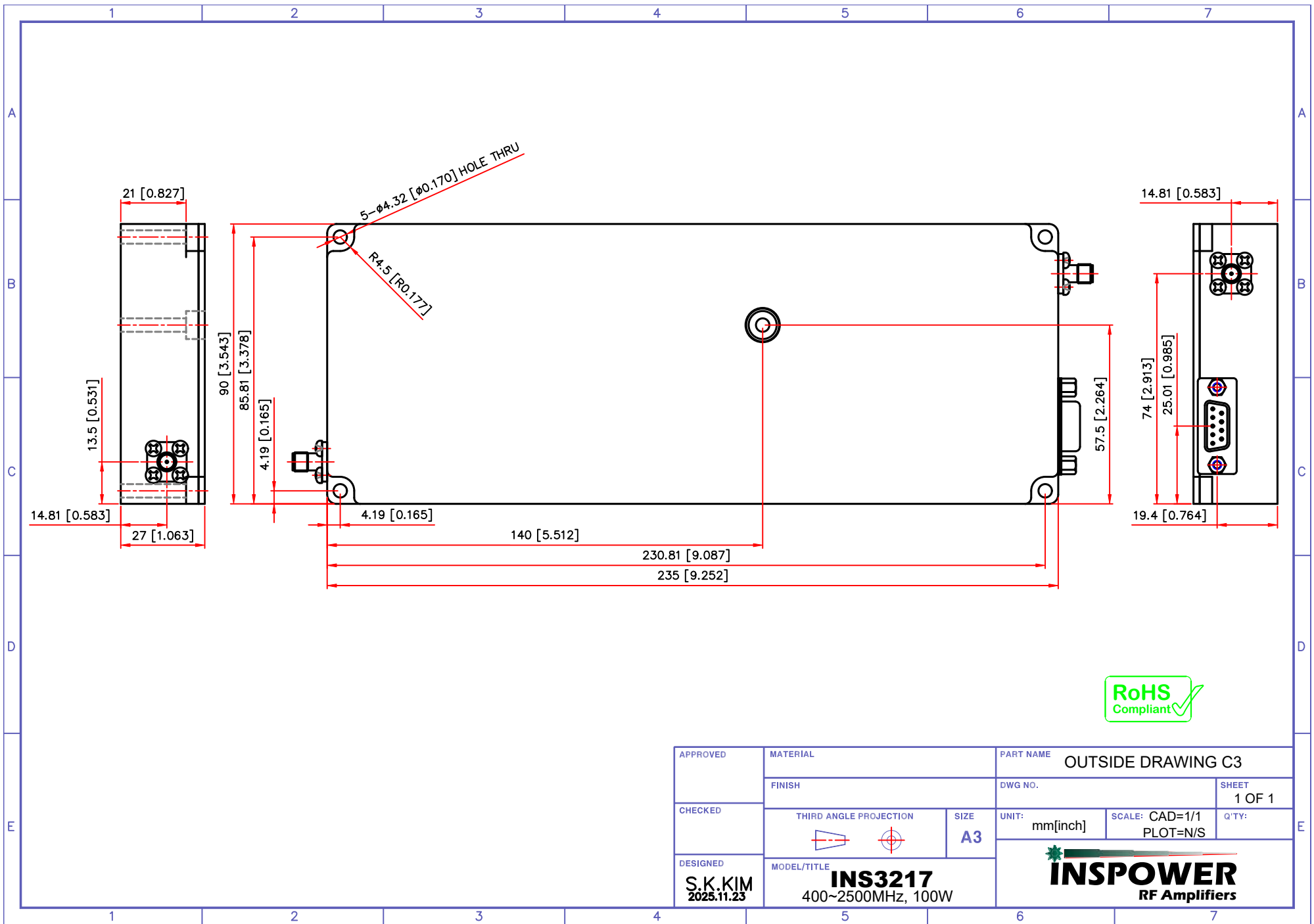
Parameters	Specifications	Remark
Operating Case Temperature Range	-40°C to +80°C	
Storage Temperature	-40°C to +85°C	
Relative Humidity non-condensing	95%	

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	VDD	+28VDC	
2	Current Monitor	Analog Voltage Relative to IDD @ 25mV/100mA	
3	Temp Monitor	Vout=10mV/°C×Temp+500mV	
4	GND	Ground	
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 C3	
CHECKED	THIRD ANGLE PROJECTION		SIZE	UNIT:
			A3	mm[inch]
DESIGNED	MODEL/TITLE		SCALE: CAD=1/1	
	S.K.KIM 2025.11.23		PLOT=N/S	
		Q'TY:		
		1 OF 1		
		INSPOWER RF Amplifiers		