

GENERAL DESCRIPTION

The NWHPRA021S is a high-power receiver assembly (HPRA) offering 32dB gain and 2.5dB noise figure over the 20 MHz to 1000 MHz band. The HPRA includes SPDT switch, Limiter, LNA and output power detector. A digital 20dB gain control feature is included.

FEATURES

- 200 W Input power handling capability
- Output power limiting protection for user's receiver

APPLICATIONS

- Communication
- Defense
- Industrial

ELECTRICAL PARAMETERS

Parameter	Unit	Min	Typ.	Max	Remarks
Operating Frequency Range (BW)	MHz	20		1000	
Gain	dB	32	-	-	
Gain flatness	dB	-	-	±1.8	
Gain setting (Gmin to Gmax)	dB	12	-	32	
Gain setting step size	dB	-	1	-	Digital attenuator controlled externally through discrete lines.
Number of Gain setting control lines	-		5		5 discrete bits ¹⁾
Noise figure at Gmax (32dB)	dB	-	2.5	-	
Peak input power handling	W	-	20	-	Includes Limiter
Output power	dBm			-10	Output power limiting function included
Input power	dBm		-52		
Limiter recovery time	µs	-	-	0.5	
Control line interface			TTL		Low" (0-0.8V) "High" (2.0-5.0V) TTL current ± 1.3mA max.
Number of RF Switch control lines			1		1 discrete bit
RF Switch isolation	dB	40	-	-	
RF Switch speed	µs	40	-	-	
Input return loss	dB	-	-	-15	
Output return loss	dB	-	-	-16	
DC Supply Voltage	V	-	12	-	
DC Supply Current	A	-	0.8	-	

Notes:

- 1) Optional serial communication (RS232/RS422/CAN-bus)

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MECHANICAL AND ENVIRONMENTAL PARAMETERS

Parameter	Unit	Min	Typ.	Max	Remarks
Operating Temperature Range	°C	-20		+70	
Storage Temperature Range	°C	-55		+100	
Dimension W x H x D	Inch/mm		5.00 x 1.16 x 4.00 / 127.0 x 29.5 x 101.6		Including mounting feet
Weight	Grams		530		
MTBF	Hours		400,000		@30°C operation
Transmitter Input	-		SMA		
Antenna Port	-		SMA		
Receiver Output	-		SMA		
DC Power and Control Connector	-		1924169		1. From Phoenix Contact 2. 10-position 3. Changes are optional

Notes:
 Specifications subject to change without notice

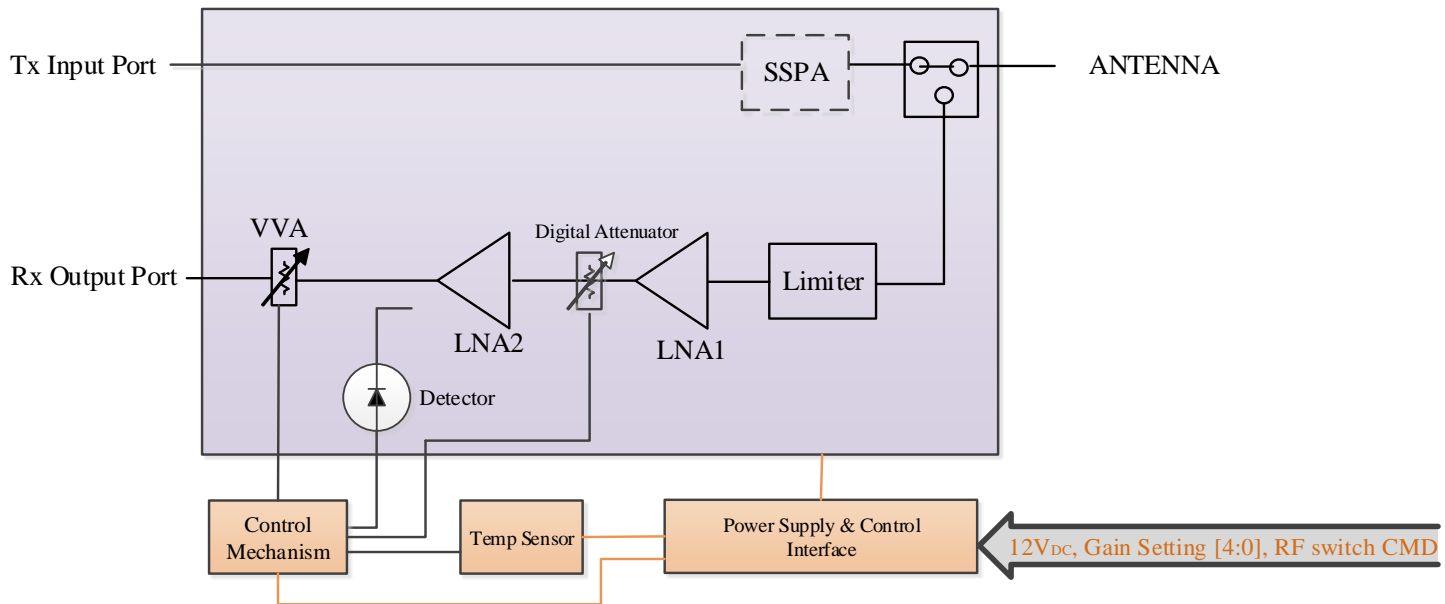


Figure 1: HPRRA block diagram

Table 1: Power and Control Connector

PIN ID	Signal	Comment
1	INPUT_+12V	Input Voltage +12V
2	GND	Ground
3	GAIN_SET_[0]	Gain Setting Control Pin 0
4	GAIN_SET_[1]	Gain Setting Control Pin 1
5	GAIN_SET_[2]	Gain Setting Control Pin 2

PIN ID	Signal	Comment
6	GAIN_SET_[3]	Gain Setting Control Pin 3
7	GAIN_SET_[4]	Gain Setting Control Pin 4
8	GND	Ground
9	RF_SW_CMD	Control for RF switch
10	GND	Ground

OUTLINE DRAWING

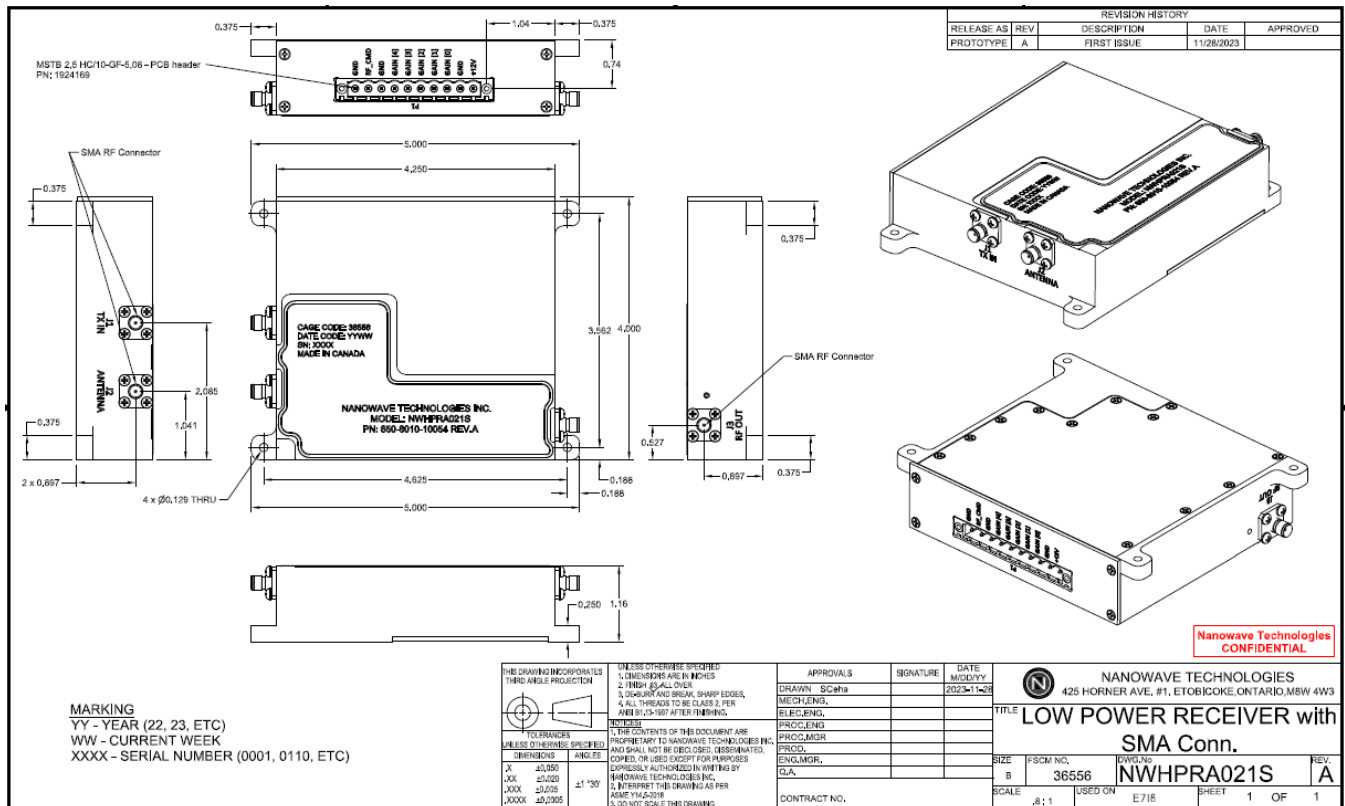


Figure 2: NWHPRA021S Outline Drawing

ADDITIONAL FEATURES

- Marking: The unit is marked with manufacturer part no., date code, and Serial Number.
- All plating and painting is RoHS compliant

For further information please contact NANOWAVE Technologies Inc. at sales@nanowavetech.com , or call at (+1) 416-252-5602.