

NWPA021-43

20 – 1000MHz 20W (CW)

Broadband SSPA

v 1.6



GENERAL DESCRIPTION

The NWPA021-43 is a broadband Solid-State Power Amplifier offering 20W CW output power over the 20 MHz to 1000MHz band. The unit has an optional fan and cooling plate available and/or can be attached to user supplied cooling systems.

The SSPA has built-in protection and internal compensation. The module has a TTL On/Off control and can be optionally equipped for remote Telemetry/Control Interface for smart RF control.

FEATURES

- TTL On/Off and Smart TM/TC interface
- Single voltage supply (12V)

APPLICATIONS

- Communication Base Stations
- Repeaters
- Defense

ELECTRICAL PARAMETERS

Parameter	Unit	Min	Typ.	Max	Remarks
Operating Frequency Range (BW)	MHz	20		1000	
Saturated Power (P_{SAT})	dBm	+43			
Nominal Output Power (NOP)	dBm	+42			
Power Gain @ NOP	dB		43		
Gain Flatness @ NOP	dB	-		± 1.8	
Noise Figure	dB		3.5		
Input Power for NOP	dBm		0.0		
Input Return Loss (S11)	dB			-12.0	
Output Return Loss (S22)	dB			-10.0	
3rd Order Intermodulation Distortion 2-Tone @ 38dBm/Tone, 1MHz Spacing (IM3)	dBc		-20.0		
Spurious Signals (Spur)	dBc			-60.0	
Switch Control for RF ON/OFF	-		TTL		
Switch Time: ON to 90% RF	ms			0.1	
Switch Time: OFF to 10% RF	ms			1.2	
DC Supply Voltage (V_{DC})	V		12.0		
Supply Current	A			5.2	Without optional cooling fan

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MECHANICAL AND ENVIRONMENTAL PARAMETERS

Parameter	Unit	Min	Typ.	Max	Remarks
Operating Temperature Range	°C	-20		+65	
Storage Temperature Range	°C	-55		+100	
Base Plate Temperature	°C			+85	
Dimension W x H x D	Inch/ mm	2.95 x 1.12 x 5.00 / 74.93 x 28.45 x 127.00			Including mounting feet Without optional cooling fan
MTBF	Hours		300,000		@30°C operation
RF Connectors Input / Output	-		SMA, Female		
DC Power and Control Connector	-		1924101		1. From Phoenix Contact 2. 4-position 3. Changes are optional

Notes:

Specifications subject to change without notice.

Table 1: Power and Control Connector

PIN ID	Signal	Comment
1	INPUT_+12V	Input Voltage +12V
2	SSPA_CTRL	Control of SSPA
3	STATUS	Summary Fault Status
4	GND	Ground

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OUTLINE DRAWING

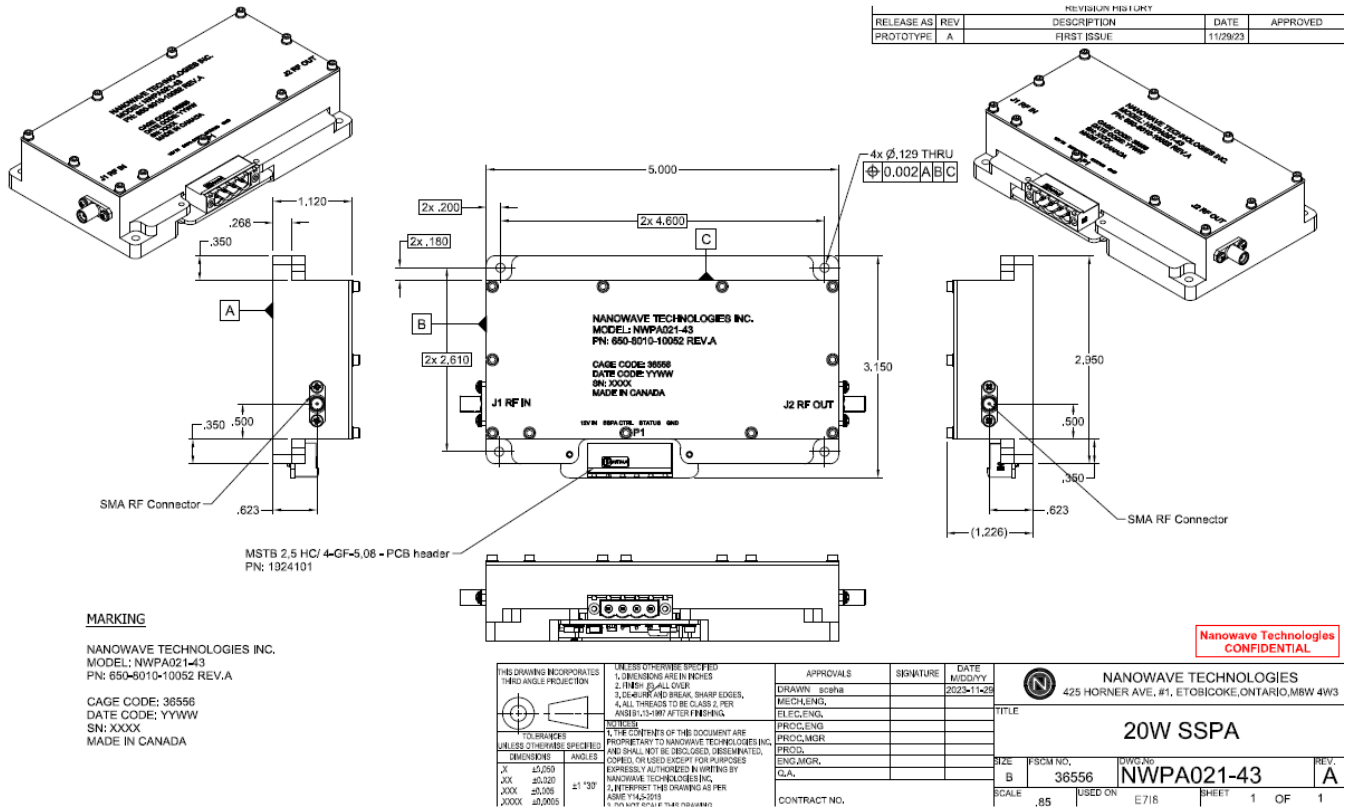


Figure 1: NWPA021-43 Outline Drawing

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.