

**250 - 500 W X-Band Pulsed Solid State Power Amplifier for
Radar Application Model NW105109-55**

PRELIMINARY

Item	Characteristic	Specification
1	Application	Airborne
2	RF Characteristics	
2.1	Peak Pulsed Power	250W, minimum (500 W)
2.2	Operating Frequency Range:	10.4 – 11.0 GHz (In 400 MHz bands)
2.3	Input Pulse Width Range	Variable = 0.2 to 15 μ s
2.4	Duty Cycle	3% typical, 25% maximum
2.5	Transmit Gating	Video “Transmitter ON” Gate = Applicable for “Nested” RF Pulse
2.6	Pulse Rate (PRF)	Variable 0 to 240 kHz
2.7	Spurious	-70 dBc max @ rated Power
3.	RF Input / Output Characteristics	
3.1	RF Input Level	5 dBm for 3dB compression
3.2	RF Input Port VSWR	1.3 : 1, maximum
3.3	RF Input Interface (Connector)	SMA – female
3.4	RF Output Power	300W peak, minimum
3.5	Pulse Droop	0.5 dB, maximum
3.6	Output VSWR Load	1.5 : 1
3.7	Output Load Protection	Operation in to VSWR 2.0 : 1 maximum
3.8	Output Interface (Connector)	WR90 Flange, aluminum with threaded holes
4.	Prime Power	
4.1	Input DC Voltages	30 – 60 VDC. Unit has internal, synchronized DC-DC converter.
4.2	DC Power Consumption	600W maximum at 25% duty cycle
5.	Monitor & Control	
5.1	Type	FPGA Based
5.2	Parameters that are Monitored	<ul style="list-style-type: none"> - Operating DC Voltages - Operating DC Current of each Power Module - Operating Temperature of each Power Module - Over-temperature protection Thermostat status - Input Voltage - Input Current
5.3	Protection Against Damage	<ul style="list-style-type: none"> - Over-temperature automatic shut-down, self cleared fault when the temperature goes back to normal - Over-current automatic shutdown. Requires resetting the unit to clear it

		<ul style="list-style-type: none"> - Pulse width or duty cycle too long - Pulse Modulator disabled if Transmit gate pulse is missing
5.4	Controlled Parameters	<ul style="list-style-type: none"> - RF ENABLE (Transmit Enabled) - Override
6.	Interfacing	
6.1	Interface	- Two (2) 25-pin Micro-D
7.	Mechanical	
7.1	Size	6.5" x 11.0" x 3.0"
7.2	Mounting Options	Flange
7.3	Cooling	Internal
7.4	Weight	4.5kg (9.9 lbs) maximum
8.	Environmental	
8.1	Operating Temperature Range	-40°C to +80°C Ambient
8.2	Operating Altitude Range	0 to 70000 feet

Note: These specifications are subject to change without prior notice