

**250 - 500 W X-Band Pulsed Solid State Power Amplifier for
 Radar Application Model NW9295-54**

Preliminary

Item	Characteristic	Specification
1	Application	Ground Fixed
2	RF Characteristics	
2.1	Peak Pulsed Power	250W, minimum (500 W)
2.2	Operating Frequency Range:	9.2 – 9.5 GHz
2.4	Input Pulse Width Range	Variable = 1 to 80 μ s
2.5	Duty Cycle	3% typical, 5% maximum
2.6	RF Turn ON/OFF Time	100 ns ON and 100 ns OFF
2.7	Transmit Gating	Video “Transmitter ON” Gate = Applicable for “Nested” RF Pulse
2.8	Pulse Rate (PRF)	Variable 0 to 2,500 pps (Hz)
2.9	Harmonics and Spurious	-60 dBc max @ rated Power
3.	RF Input / Output Characteristics	
3.1	RF Input Level	0 to + 5 dBm, range
3.2	RF Input Port VSWR	1.3 : 1, maximum
3.3	RF Input Interface (Connector)	SMA – female
3.4	RF Output Power	250W peak, minimum
3.5	Noise Power, TX Gate OFF	-114 dBm / 1MHz
3.6	Pulse Droop	0.5 dB, maximum
3.7	RF Pulse Overshoot	< 2%, recovery is 250 ns maximum
3.8	Output VSWR Load	1.5 : 1
3.9	Output Load Protection	Infinite VSWR at any phase over indefinite time
3.10	Output Interface (Connector)	WR90 Flange, aluminum with threaded holes
3.11	Waveguide Pressurization	5 psig, max
4.	Prime Power	
4.1	Input AC Voltages	90 – 60 VAC, Universal Input, Single Phase 47-63 Hz
4.2	AC Power Consumption	150W, maximum
4.2	Transient Protection	EMI Filter, Varistor and GTD
4.3	Circuit Protection	Circuit Breaker
5.	Monitor & Control	
5.1	Type	Microprocessor Based
5.3	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 - Fans operation

		<ul style="list-style-type: none"> - Output RF Power - Reflected Power - Output VSWR
5.4	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 - VSWR Warning - Pulse width or duty cycle too long - Pulse Modulator disabled if Transmit gate pulse is missing
5.5	Controlled Parameters	<ul style="list-style-type: none"> - RF ENABLE (Transmit Enabled) - Turn Cooling Fans ON or OFF at specified Temperature points
5.6	Servicing Protection	Manual Override of remote operation
6.	Interfacing	
6.1	Interface Provisions	<ul style="list-style-type: none"> - RS-232 for Monitor & Control Operation - Parallel Hardware - Ethernet
6.1	RS-232C Connector	DB-9
6.2	Parallel/Hardware Interface Connector	DB-25
6.3	Ethernet	RJ-45
6.4	Transmit Gate Input	BNC - female
7.	Mechanical	
7.1	Type of Package	19" Rack Mount Chassis
7.2	Size	6RU High, 26" depth
7.3	Mounting Options	Sliding Rails
7.5	Cooling	Forced Air (Internal)
7.6	Weight	60 lbs, maximum
8.	Environmental	
8.1	Operating Temperature Range	-40 to +60 deg. C ambient
8.2	Operating Altitude Range	0 to 70000 feet

Note: These specifications are subject to change without prior notice