

Teledyne Microwave Solutions' **350W to 1kW X-Band Solid State Power Amplifier (SSPA)** offers superior RF performance for the 8-11 GHz radar market. Designed in a compact, environmentally sealed housing, the SSPA can reliably handle any airborne or ground-based environment.

Available with 1GHz bandwidth anywhere in the 8-11GHz band, the amplifier offers 350W, 550W and 1000W peak output power. Extended bandwidth operation is possible with de-rated output beyond 1GHz. These amplifiers can also be combined to achieve even higher output power levels.

Options include a DC-DC converter, allowing the amplifier to be run from any DC Voltage input. An optional harmonic filter improves the harmonic performance to -80 dBc. Remote monitoring and control is also available.

FEATURES

- Multiple Power Levels
- Wide Bandwidth
- Low Spurious Emissions and Phase Noise
- Temperature and Module Fail Alarms

OPTIONS

- DC-DC Converter
- Harmonic Filter
- Remote Monitoring and Control

TYPICAL SPECIFICATIONS

- 9.0-10.0 GHz
- 350W to 1kW Peak Power
- 32V DC Input
- 10% Duty Cycle
- 30-60 dB Small Signal Gain
- -40C to +85C Operating Temperature

350W, 550W, & 1KW

X-Band GaN SSPA

General Electrical Specifications

PARAMETER	NOTES	SPECIFICATION	UNITS
Operating Frequency Power Levels Available Duty Cycle	Range Rated Power At 1kW output, "B" package	8-11 available, 9.0-10.0 std. 350, 550 and 1000 0 - 10	GHz W %
Gain (Large Signal) Gain Flatness	per 200 MHz	40-45 1.5	dB dB pk-pk
Pulse Droop	10 - 90% @ rated power, 100 μ s pulse width	0.5	dB
Conducted Harmonics	2nd harmonic @ rated power 3rd harmonic @ rated power	-35 -55	dBc dBc
Spurious	Non-harmonic, max, up to PRF/2	-90	dBc
Group Delay	Linear	<12	ns
Noise Power Density	Transistors biased on	-40	dBm/MHz
Prime Power	Input per 300W at 10% Duty Cycle Input Voltage Input with DC/DC Converter Option	125 32 18-36	W V V

Environmental Specifications

PARAMETER	NOTES	LIMITS	UNITS
Operating Temperature	Baseplate, 10% Duty	-40 to +75	$^{\circ}$ C
Storage Temperature	Non-Operating	-50 to +100	$^{\circ}$ C
Relative Humidity	Non-Condensing	0 to 95%	%
Cooling System	Conduction-cooled	N/A	N/A

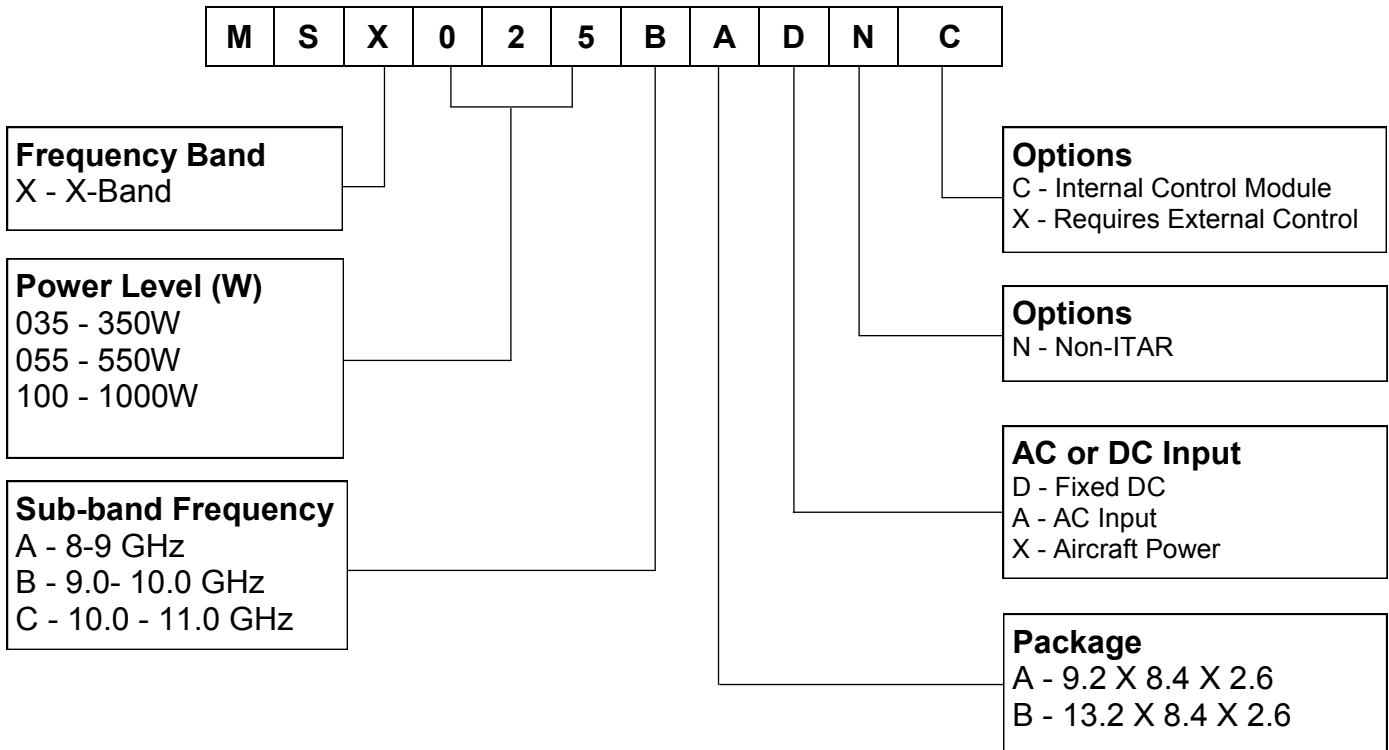
Mechanical Specifications

PARAMETER	NOTES	LIMITS	UNITS
Size	Length Width Height	9.2 (13.2 for 1000W) 8.4 2.6	Inches Inches Inches
Weight	1kW SSPA	12.3	lbs
Endurance	Shock Vibration	20, 11 2.1, 5-2000	g pk, mS grms, Hz
Output	SMA, TNC, WR90		
Input	SMA female		

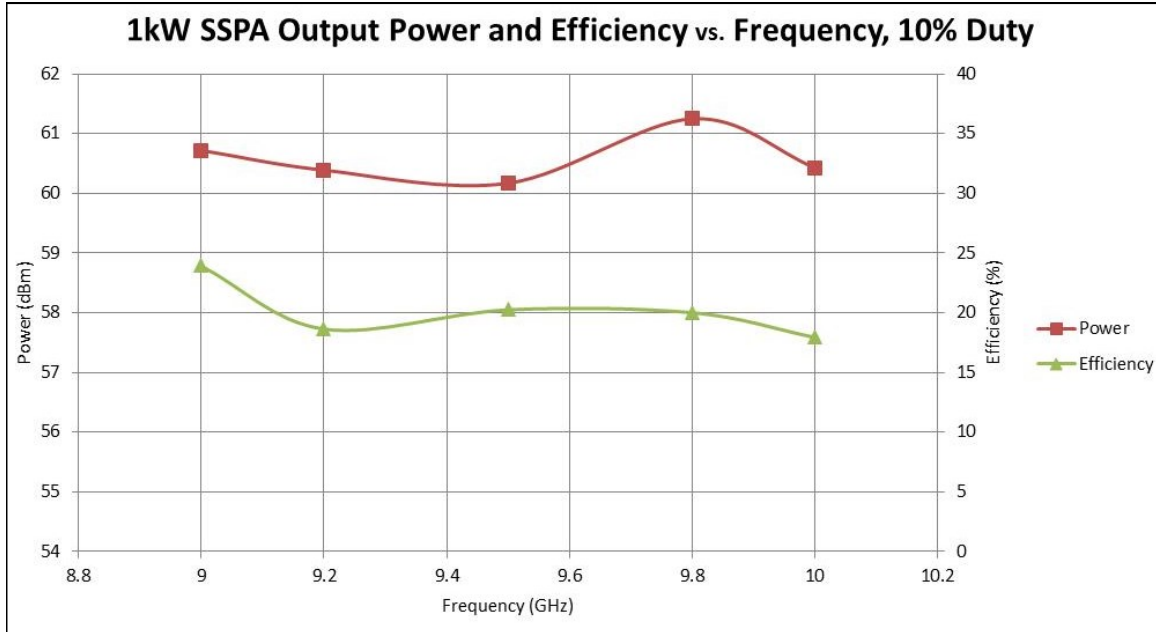
Specifications are subject to change without notice.

350W, 550W, & 1KW X-Band GaN SSPA

Model Number Configuration Matrix



350W, 550W, & 1KW X-Band GaN SSPA



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