

## SSPA 20-6000 MHz Amplifier 2.5 W

LW10-793611

### TYPICAL APPLICATIONS

The SSPA is ideal for:

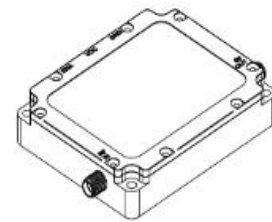
- Electronic Warfare/Countermeasures
- Broadband Mobile Jamming Applications
- Airborne, Aircraft and UAV Equipment
- Power Amplifier Stage for Wireless Infrastructure
- Test and Measurement Equipment
- General Purpose Broadband Transmitter Amplification

### GENERAL DESCRIPTION

The SSPA is a solid-state, Class AB broadband power amplifier module based on advanced GaN HEMT technology. The SSPA is ideal for pulsed or CW applications, offering exceptional performance and functionality in a small and lightweight form factor.

### PRODUCT FEATURES

- High Bandwidth, Output Power and Efficiency
- High Reliability and Rugged construction
- Space-Saving Connector System



### ELECTRICAL CHARACTERISTICS $T_c = +25\text{ }^\circ\text{C}$ , 28 VDC, 50 $\Omega$ System (unless otherwise noted)

PARAMETER	MIN	TYP	MAX	UNITS
Operating Frequency Range	20		6000	MHz
Rated Output Power CW (ROP)		34		dBm
Saturated Output Power ( $P_{SAT}$ )	34	36.5		dBm
Power-Added Efficiency @ $P_{SAT}$	13.5	20.0		%
Gain @ ROP	29			dB
Gain Flatness vs Frequency @ ROP		4		dB pk-pk
Input Return Loss	12	20		dB
Output Return Loss	10			dB
Noise Figure (NF)		5		dB
Output Third-Order Intercept Point (OIP <sub>3</sub> )		32		dBm
Harmonic Emissions @ $P_{SAT}$		-10		dBc

Linwave reserves the right to make changes, without notice, in the products, including circuits, standard cells, and/or software, described or contained herein in order to improve design and/or performance.

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 Activity No 4559

Non-Harmonic Spurious Emissions		-65	-60	dBc
DC Supply Voltage		28		V
Current Consumption @ ROP	660		780	mA
Control Voltage:				
	Enable	2.3	5.0	V
	Mute	0.0	0.5	V
Current Consumption- Mute		200		mA

## MECHANICAL CHARACTERISTICS

PARAMETER	VALUE	UNITS
Dimensions (excluding connectors)	75 x 60 x 15	mm
Mass	150	g
RF In / Out Connectors	Hermetic SMA Female	-
DC In / Control Connector	Hermetic Feedthrough Pin	-
Cooling Method	External Heatsink to Baseplate (Not Supplied)	-

## ENVIRONMENTAL CHARACTERISTICS

PARAMETER	MIN	TYP	MAX	UNITS
Case or Baseplate Temperature	-40		+85	°C
Relative Humidity (non-condensing)			95	%
Ingress Protection	IP67			-

## ABSOLUTE MAXIMUM RATINGS (Not simultaneous)

RF Input Power	+15 dBm
RF Output Mismatch	VSWR 5:1 at all phase angles
Case or Baseplate Temperature (Operating)	-40 °C to +85 °C
Case or Baseplate Temperature (Non-Operating)	-40 °C to +100 °C
DC Supply Voltage (VDC to GND)	24V to 32V
Control Interface (ENA to GND)	-0.5 V to 5.5 V
ESD Sensitivity	HBM Class 1A

### Maximum Ratings.

Exceeding maximum ratings may cause permanent damage. Operation between operating range maximum and absolute maximum for extended periods may reduce device reliability. Absolute maximum ratings are stress figures only and functional operation under these conditions is not implied.

### ESD Precautions.

Although this product contains circuitry to protect it from damage due to ESD, observe the same precautions as with other ESD-sensitive devices when handling.

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