

Power Amplifier 27.5GHz -31GHz 20W CW

LW10-797698

TYPICAL APPLICATIONS

The SSPA is ideal for:

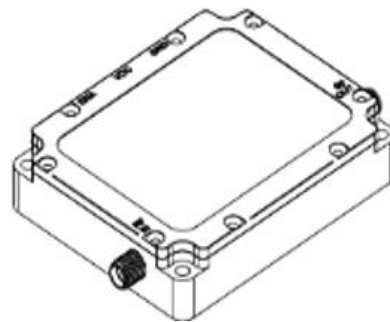
- Satcoms
- Telecoms Infrastructure
- Defence comms systems

GENERAL DESCRIPTION

The SSPA is a solid-state, 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. Good gain flatness, efficiency and wide operating temp range. The amplifier has an enable/disable feature to allow external control.

PRODUCT FEATURES

- High gain
- Conduction cooled via the baseplate (no cooling fans)
- Fully sealed for harsh environments
- High Reliability and Rugged construction
- Coax output (Waveguide option)



ELECTRICAL CHARACTERISTICS $T_c = +25\text{ }^\circ\text{C}$, 22 VDC, 50 Ω System (unless otherwise noted)

PARAMETER	MIN	TYP	MAX	UNITS
Operating Frequency Range	27.5		31.0	GHz
Rated Output Power CW (ROP)		40		dBm
Saturated Output Power (P_{SAT})		43		dBm
Power-Added Efficiency @ P_{SAT}		20		%
Small Signal Gain		21		dB
Power Gain		17		dB
Gain Flatness vs Frequency @ P_{SAT}		2		dB pk-pk
Input Return Loss	8	10		dB
Output Return Loss	6	8		dB
IMD3 (Pout 37dBm/tone) 10MHz spacing		-25		dBc
DC Supply Voltage		22	24	V
Quiescent current (enabled, no RF signal)		500		mA
Current Consumption @ P_{SAT}		4200		mA
Current consumption (disabled mode)		25		mA
Control (enable/disable)	Ground to disable, Open to enable (internal pull up)			

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MECHANICAL CHARACTERISTICS

PARAMETER	VALUE	UNITS
Dimensions (excluding connectors)	105 x 50 x 22	mm
RF In / Out Connectors	K type female (standard) Output connector option - WR28	-
DC In / Control Connector	Hermetic Feedthrough Pin	-
Cooling Method	External Heatsink to Baseplate (Not Supplied)	-

ENVIRONMENTAL CHARACTERISTICS

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

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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