

20 W GaN SSPA (MULTIBAND SOLID-STATE POWER AMPLIFIER)

Compact All-In-One L-, S- and C-Band Dual-Output SSPA

L3Harris multiband 20 W GaN SSPA is a dual-output digitally controlled power amplifier with four independent gallium nitride solid-state power amplifiers. It is capable of transmitting in L-Band, S-Band, Lower C-Band or Upper C-Band of the radio frequency (RF) spectrum. Our 20 W GaN SSPA is frequently used in targeting pod applications that require multi-frequency operation in rugged, SWaP-constrained environments.

PRODUCT DESCRIPTION

The 20 W GaN SSPA is a small, lightweight amplifier designed to be paired with multiband modems and radios—either stand-alone for a transmit-only system or integrated with additional components to form a duplex system. Our 20 W GaN SSPA amplifier is a multiband dual output solid-state power amplifier (SSPA) built using gallium nitride (GaN) technology. Our RF amplifier consists of a power supply, four independent solid-state power amplifiers and a digital control section. An RS-422 interface provides temperature monitor, RF output power level detect and VSWR fault status. The RS-422 interface also provides control of the band selection for RF power amplification and blanking capability of the RF signal. This multiband SSPA can select among and operate in L-Band, S-Band, Lower C-Band or Upper C-Band of the radio frequency (RF) spectrum. Our GaN multiband SSPA is designed for use with multiple L3Harris products.



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All-In-One Compact Multiband Design

KEY FEATURES

- > Dual output of L-, S-, Lower C- or Upper C-Bands
- > Rugged, compact design
- > Low SWaP
- > Supports L3Harris CMDL, CMDL 2, VORTEX® and ROVER® 6

SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

- > L-Band: 1.625 GHz to 1.85 GHz
 - Pout = +42.0 dBm min (ambient), +41.0 dBm min (hot)
- > S-Band: 2.20 GHz to 2.50 GHz
 - Pout = +41.0 dBm min (ambient), +40.0 dBm min (hot)
- > C-Band: 4.40 GHz to 4.94 GHz
 - Pout = +43.0 dBm min (ambient), +42.0 dBm min (hot)
- > C-Band: 5.25 GHz to 5.85 GHz
 - Pout = +42.3 dBm min (ambient), +41.3 dBm min (hot)

PHYSICAL CHARACTERISTICS

- > Size: 5.63" (l) x 4.88" (w) x 0.94" (h)
- > Weight: 1.6 lb.
- > Power
 - Input voltage: 26 VDC to 32 VDC
 - Power Consumption: 126 W (max) at 28 VDC

ENVIRONMENTAL CHARACTERISTICS

- > Operational Temperature: -40 °C to +75 °C (baseplate)
- > Non-Operational Temperature: -55 °C to +85 °C
- > Altitude (MSL): -500 ft. to 50,000 ft.
- > Vibration: 11.87 Grms, 5 Hz to 2000 Hz
- > Shock: 22 g, 11 ms sawtooth peak (MIL-STD-810F, Method 516.5 Proc. I)



Back View



Front View

20 W GaN SSPA (Multiband Solid-State Power Amplifier)

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