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# Solid State Power Amplifier 100 to 2000 MHz, 50 Watts **MODEL BME1829-50 with Low/High Band**

**Features:**

- GaN Technology
- Wide Band Operation
- > 2W CW from 100-500MHz
- >50W CW from 800-2000MHz
- TTL Hot Switchable Band Control
- Dual Directional Coupler
- Compact & Light Weight
- Military Environment



## PERFORMANCE SPECIFICATIONS

**ELECTRICAL**

- Frequency Range: 100 to 2000 MHz
  - Low Band Mode: 100-799MHz
  - High Band Mode: 800-2000MHz
- RF Input Power: -10 dBm ± 0dBm @ +25°C
- RF Output Rated Power: >2 Watts (Low Band Mode)
- RF Output Rated Power: >50 Watts (High Band Mode)
- Small Signal Gain Flatness: ≤ ± 3.0 dB
- RF Input Overdrive: +5 dBm
- Input VSWR: ≤ 2:1
- Harmonic Rejection (High Band): ≤ -12 dBc
- Spurious Signals: ≤ -55 dBc
- Class of Operation: A/AB Linear
- DC Input @ 47dBm: +28 VDC ± 0.5V @ 7A typical
- PA Enable: <5 μs
- Load VSWR: 3:1 Full Power; Infinite 30 sec
- Noise Figure ≤ 12dB
- Fwd/Rev DDC Ports 50dB±2 with 20dB Directivity

- Blanking Speed < 5usec
- Blanked Noise Level -150dBc/Hz
- Band Switch Speed(5V TTL): <10msec

**ENVIRONMENTAL**

- Temperature:
  - Operating: -40°C to +85° Base Plate
  - Storage: -40°C to +95°C
  - Thermal shutdown: +95°C ± 5°C
- Altitude:
  - Operating: 30,000 feet
  - Non-Operating: 40,000 feet
- Shock: MIL-STD-810F Method 516.5
- Vibration: MIL-STD-810F Method 514.8
- Humidity: 95% without condensation
- Cooling: Conduction cooled

**PHYSICAL**

- Size: 5.5" x 4.5" x 1.6"
- Weight: 1.9 lbs.

**Model BME1829-50W** is a Class A/AB CW GaN linear amplifier, which operates over the full 100 to 2000 MHz bandwidth with a built in TTL controlled Low/High Band Switch. In the Low Band Mode, the SSPA supplies >2W from 100-799MHz, and in the High Band mode the SSPA supplies > 50W from 800-2000MHz, both modes provide rated power into a 3:1 load VSWR when driven with a -10dBm RF signal. The amplifier also features a Dual Direction Coupler on the output and features thermal shut-down protection above 95C baseplate temperature. The SSPA is designed to meet MIL STD 810F Shock and Vibration as well as can operate up to 25K feet with 95% humidity N/C. The assembly is 5.5" x 4.5" x 1.6" and weighs 1.9 lbs. Unit must be mounted to a proper heatsink (not supplied).