PA-xxxx-xxxxM-50dBm-32V

SUB6G-100W Power Amplifier Modules

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On Order

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Sub-6GHz 100W (SUB6G-100W) Power Amplifier Modules are solid-state power amplifiers (SSPA) designed for 5G wireless communication infrastructure, EMC testing, electronic warfare jamming, and RF measurements. Utilizing advanced **Gallium Nitride (GaN) high-frequency chip technology**, these modules deliver a **saturated output power of up to 100W (50 dBm)** within the **0.4GHz to 6GHz** Sub-6GHz frequency range, offering high efficiency, excellent linearity, and superior thermal management.

Architectural Classification of Sub-6GHz 100W PA Modules

Based on frequency coverage requirements, 100W Sub-6GHz power amplifiers are categorized into three main types:

- **Ultra-Wideband Modules (400MHz - 6000MHz)**
  - **Key Features**: Utilize distributed amplifier topologies to achieve a gain flatness of ±2.5dB. Integrate D-Sub interfaces for real-time monitoring of temperature and current, alongside advanced thermal and over-temperature protection.
  - **Applications**: 5G base station measurements, LTE/Wi-Fi signal enhancement, defensive jamming.
- **5G Mainstream High-Band Modules (1GHz - 6GHz / 2GHz - 6GHz)**
  - **Key Features**: Provide a high gain of approximately 50dB. RF interfaces typically use standard SMA-Female inputs and N-Type Female outputs to ensure stable signal transmission across high frequency bands.
- **Custom Narrowband / High-Frequency Modules (4GHz - 6GHz)**
  - **Key Features**: Operate on standard +28VDC or 32VDC power supplies. Feature highly compact designs with enhanced thermal heat sinks on the bottom base for

deployment in harsh environments.