Rohde & Schwarz R&S BBA300



Rohde & Schwarz announces the expansion of its proven R&S®BBA300 family, a series of compact, high-end solid-state broadband amplifiers. With the introduction of the new R&S®BBA300-DE500 and R&S®BBA300-DE1000 models, this amplifier now covers power requirements of 500 W and 1000 W. Designed as single-band solutions, these units cover the entire frequency range from 1 GHz to 6 GHz without band switching, significantly increasing efficiency in automated test sequences.

Requirements in the automotive, aerospace, and defense sectors are steadily increasing. Precise generation of high field strengths is essential, particularly for vehicle component testing, full-vehicle testing, and High-Intensity Radiated Fields (HIRF) applications. The BBA300 family utilizes advanced Solid-State Power Amplifier (SSPA) technology, offering higher availability and robustness compared to traditional Traveling Wave Tube (TWT) amplifiers. The units are designed for a wide range of modulation types, from standard amplitude and pulse modulation to complex OFDM signals. Thanks to high linearity and extreme mismatch tolerance, these amplifiers deliver reproducible measurement results even under difficult load conditions.

A key feature of the new high-power classes is their high-power density. The systems are housed in 30U racks pre-configured for mounting horn antennas. To minimize cable loss at high frequencies, the RF output (optimized with 7/16 connector characteristics) is positioned centrally in the rack. This shortens the path to the antenna and optimizes the system link budget. The BBA-PK1 option (available

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for the BBA300-DE500) allows the unit to be flexibly adapted to specific testing requirements. Users can adjust the bias point to prioritize either maximum linearity for complex signals or precise reproduction of pulsed signals. Additionally, the ratio between output power and mismatch tolerance can be individually configured.

"By expanding the BBA300 series to up to 1000 W in single-band operation, we are directly addressing our customers' needs for higher test speeds and system reliability," says Ralf Heinrich, Product manager at Rohde & Schwarz. "The combination of solid-state robustness and the ability to operate across ultra-broadband frequencies without band changes sets a new standard for efficiency in EMC test centers."

The BBA300 family features a modular concept. Existing systems can be expanded or combined with other amplifier families, such as the BBA130/150, to create tailored system solutions. This ensures high investment security for test houses and development laboratories.

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