Rohde & Schwarz presents the world's first broadband amplifiers with tunable transmission characteristics

The R&S BBA130 broadband amplifiers from Rohde & Schwarz are the world's first amplifiers in the 80 MHz to 6 GHz range that allow users to optimize the transmission characteristics to the requirements of a specific application. The operating class for the transistors can be adjusted between Class A and Class AB during operation. The tolerance against mismatch at the output can also be changed to provide more power. Just one amplifier covers a variety of test scenarios during design and product validation.

Munich, May 24, 2017 – New technologies and innovations such as eMobility, Internet of Things, 5G and satellite communications are driving markets, bringing about many new developments in the field of wireless communications, in particular RF components, RF subsystems and systems. The R&S BBA130 broadband amplifier family from Rohde & Schwarz addresses a wide range of tests during design and product validation.

The R&S BBA130 broadband amplifiers were designed for use in development, production and quality assurance and offer output powers from 22 W to 4200 W in the 80 MHz to 6 GHz frequency range. Thanks to their compact, modular design, the amplifiers can be optimally scaled and configured. This modular design also provide a secure investment with the option to add future power and frequency range upgrades.

Two control parameter settings are used to optimize the output signal from the amplifier: a continuously variable bias point between Class A and Class AB and the choice between maximum output power and high mismatch tolerance. The user can change the setting of both controls during operation, e.g. if the signal waveform changes or if different requirements are placed on the output signal while the test is running. Now only one amplifier is needed to measure a DUT's specified data and determine its load limits.

Varying the bias point for the transistors changes the output signal characteristics. A bias point in Class A yields very good linearity and good harmonic performance and is ideal for generating spectrally clean CW signals. A bias point in Class AB provides faithful reproduction of pulsed signals and improves the efficiency of the amplifier.
The modular design of the R&S BBA130 family enables flexible dual-band configurations with two different frequency ranges in one housing. Twin-band configurations with two identical amplifiers in one housing are also possible. With its compact dimensions, the R&S BBA130 family is optimized for maximum flexibility in a small footprint. An RF output power of up to 750 W below 1 GHz and up to 300 W above 1 GHz in just four height units demonstrates the amplifier family’s excellent power density. The amplifiers can be combined into highly integrated systems with flexible frequency and power configurations.

With R&S BBA130 amplifiers, users can adjust the operating class, select between high output power and high mismatch tolerance, extend the frequency range and scale the output power. They are now available from Rohde & Schwarz in the frequency ranges from 80 MHz to 1.0 GHz, 0.69 GHz to 3.2 GHz and 2.5 GHz to 6.0 GHz with output power levels of 22 W to 4200 W.

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Rohde & Schwarz
The Rohde & Schwarz electronics group offers innovative solutions in all fields of wireless communications as well as in IT security. Founded more than 80 years ago, the independent company has an extensive sales and service network with subsidiaries and representatives in more than 70 countries. On June 30, 2016, Rohde & Schwarz had approximately 10,000 employees. The group achieved a net revenue of approximately EUR 1.92 billion in the 2015/2016 fiscal year (July to June). The company is headquartered in Munich, Germany, and also has strong regional hubs in Asia and the USA. R&S ® is a registered trademark of Rohde & Schwarz GmbH & Co. KG. All press releases, including photos for downloading, are available on the Internet at http://www.press.rohde-schwarz.com.