Broadband Quadrature Modulator Integrates Automatic Gain Control

Analog Devices, Inc. introduces its high-performance broadband I/Q quadrature modulator to integrate automatic gain control (AGC) circuitry within a compact 6 × 6 mm LFCSP (lead-frame chip-scale package). The ADL5386 provides a combination of performance and integration levels for low IF and RF transmitters within broadband wireless access systems, microwave radio links, cable modem termination systems and cellular infrastructure equipment. Operating over a 50 to 2,200 MHz frequency range, the modulator supports high-data-rate complex modulation for next-generation communication infrastructure equipment. Functionally complete, it integrates a 25 dB dynamic range output power detector and a VVA (voltage variable attenuator). Together, they form a closed-loop automatic level control (ALC) or AGC, enabling the device to accurately set the output power to a user determined level.