Successive Detection Log Video Amps Are Offered in Die and Module Packaging

Hittite Microwave has launched two successive detection log video amplifiers (SDLVA) that operate over the 0.6 to 20 GHz and 2 to 20 GHz frequency ranges respectively. Available in die format, the HMC913 features power limiter circuitry at its RF input and carries a class 1A ESD rating (250 V HBM). The HMC913 and the HMC-C078, which is available in miniature connectorized module packaging, are suitable for designers with space and power-constrained applications including EW and ELINT receivers, DF radar, ECM, IFM systems, and missile guidance. The HMC913 employs a successive compression topology, which delivers a high logging range of 59 dB and provides a nominal slope of 14 mV/dB. It is capable of processing RF pulses with amplitudes from -54 dBm to +5 dBm with less than 10 ns rise times, and with only 25 ns of recovery time. The HMC913 exhibits frequency flatness of better than ±1.5 dB at -25 dBm input power, while logarithmic linearity is better than ±1.5 dB over the full -55 °C to +85 °C operating temperature range. It consumes 80 mA from a single +3.3 V supply. The HMC-C078 is a compact, hermetic, connectorized, wideband SDLVA module with limited RF output. It operates from 2 to 20 GHz with a high logging range of 50 dB, and exhibits frequency flatness of ±1 dB at -25 dBm input power. HMC-C078 provides +7dBm of saturated RF output power with a small-signal gain of 44 dB.

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