

Optical Modulator Drivers Suited for 10 GbE Transmitters

Two new SMT packaged optical modulator drivers are now available from Hittite Microwave. These drivers operate from DC to 20 GHz, and are designed to drive Lithium Niobate Mach-Zehnder (MZ) and Electro-Absorptive (EA) optical modulators with up to 8 Vp-p signals, while exhibiting low additive RMS jitter. Appropriate for meeting the rigorous requirements of 10 GbE transmitters, VSR modules and 40 Gb/s (D)QPSK modules, the HMC870LC5 and the HMC871LC5 also function well in broadband test & measurement applications. The HMC870LC5 and the HMC871LC5 are GaAs MMIC pHEMT distributed amplifiers which operate from DC to 20 GHz, and are optimized for driving MZ and EA optical modulators respectively. These drivers also provide up to 17 dB of gain, and exhibit very low additive RMS jitter of 300 fs for 10 Gb/s operation. Both devices support 20 Gbps operation, provide excellent gain flatness of ± 0.5 dB, and feature output swing cross point adjustment. The output swing for the HMC870LC5 is adjustable from 2.5 Vp-p to 8 Vp-p, while the output swing of the HMC871LC5 can be adjusted from 1 Vp-p to 4 Vp-p.

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