13, 28 & 45 Gb/s High Speed Logic Products in SMT

Hittite Microwave Corporation has expanded its High Speed Logic product line with the release of four new logic devices including a 28 Gbps 1:2 Fanout Buffer, a 13 Gbps 1:4 Fanout Buffer, and two XOR/XNOR gates operating at 28 Gbps and 45 Gbps.

These devices are ideal for a wide range of new and emerging optical, networking, and storage area network (SAN) standards including: 40/100 GbE, 40G (D)QPSK ,100G DP-QPSK, 14G Fiber Channel and Infiniband EDR, and broadband test equipment.

The HMC850LC3C is a 1:2 Fanout Buffer designed to support data transmission rates up to 28 Gbps, and clock frequencies as high as 20 GHz. The HMC940LC4B is Hittite's first 1:4 Fanout Buffer, and supports data transmission at up to 13 Gbps, or clock buffering up to 13 GHz. These Fanout Buffers feature differential inputs and outputs which are DC coupled and terminated on chip with 50 Ohm resistors to ground. The outputs may be used in either single-ended or differential modes, and should be AC or DC coupled into 50 Ohm resistors connected to ground.

The HMC850LC3C 1:2 Fanout Buffer exhibits propagation delays of 75 ps, while rise and fall times are less than 16 ps. Ideal for high performance, broadband test applications, the HMC850LC3C exhibits only 2 ps p-p of deterministic jitter and less than 0.2 ps rms of additive random jitter.

The HMC851LC3C and the HMC844LC4B are XOR/XNOR gate functions which support clock frequencies as high as 28 GHz and data transmission rates up to 28 Gbps and 45 Gbps respectively.

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