Oki Semiconductor launches EML driver IC for 100Gbps Ethernet application

-TARGETS MORE THAN 50% MARKET SHARE WITH WORLD-LEADING SMALL SIZE AND LOW POWER CONSUMPTION-

TOKYO, March 19, 2009 – Oki Semiconductor announces development of the new product KGA8105, a single-chip EML (*1) driver offering world-leading small size and low power consumption for use in the 100Gbps Ethernet application. The company aims to gain a share of at least 50% in the 100Gbps Ethernet EML driver IC market. Sample the products are available now and volume shipment is scheduled to start from June 2009.

100Gbps Ethernet, the next-generation high-speed Ethernet, is expected to be introduced from 2010. 100Gbps Ethernet for 10km or 40km transmission uses four multiplexed 25Gbps signals with differing wavelengths, necessitating the components to be capable of high-speed of over 25Gbps operation, of compact size, and have low power consumption for mounting the four signal components.

The KGA8105 is a single-chip EML driver IC which operates at 25Gbps, and uses Oki Semiconductor’s GaAs PHEMT(*2) device, offering high-speed and low power consumption performance of 1.25 W (2.5 Vpp output amplitude) at 25.8 Gbps operation. The product is presently provided in die form, with plans for release in small package form, 4mm x 4 mm QFN, in the 2nd quarter of this year.

This IC generates high-quality optical waveforms for use in 100Gbps Ethernet transceiver, and also facilitates size and power consumption reductions. Oki Semiconductor employs high-speed, low power consumption device technology to offer this high-performance, high-quality optical communications driver IC to the optical communications market.

The EML drivers for 100Gbps Ethernet application will be exhibited and explained at the Oki Semiconductor booth (#2431) at the Optical Fiber Communications Conference & Exposition and the National Fiber Optic Engineers Conference (OFC/NFOEC2009) (http://www.ofcnfoec.org/) joint venue to be held in San Diego, California, March 22 to 26 (Sun. to Thur.), 2009.

*1. EML (Electro-Mechanical Lightwave) is a lightwave device that incorporates an electro-optic modulator to change an electrical signal into an optical signal for transmission over optical fibers

*2. PHEMT (Pseudomorphic High Electron Mobility Transistor) is a type of transistor that is used in RF and microwave applications.
Sales Plan

- Sample shipment: March 2009
- Volume shipment: June 2009
- Sales target: > 50% of market share by fiscal 2010.

Main features

- 25.8Gbps operation
- 2.5Vpp amplitude (typical)
- 1.25 W (typical)
- 1.7 mm x 1.2 mm (chip size).

Glossary

*1: EML (electro-absorption modulated laser):
Optical semiconductor component integrating laser diode and electro-absorption optical modulator.

*2: GaAs PHEMT:
High-speed compound semiconductor device using 2-dimensional electron gas layer for channel on
GaAs compound semiconductor substrate

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