Semiconductor Solutions for High Speed Communication and Fiber Optic Applications



The FOA21002A2 is the industry's first STM64/OC-192 Laser Diode Driver for SDH/SONET systems in Silicon Germanium technology. This new device is a key component for leading-edge high speed optical communication systems for regional, metropolitan and backbone transport data networks at the highest speeds of up to 10.7 Gbit/s over one single fiber. It is a member of the complete 10 Gbit/s chipset in the Silicon Germanium technology with the industry's lowest power consumption.

FOA21002A2

Features

- Nominal data rate up to 10.7 Gbit/s
- Suitable for driving electro-absorption modulators (EAM)
- Suitable for direct modulation of 50 or 25 Ω matched laser diodes
- Adjustable output current swing up to 60 mA (3 V across 50 Ω)
- Pulse shape adjustment: duty cycle, output voltage undershoot
- Fully differential design
- Low power consumption

Typical Applications

- Fiber optics telecom and datacom applications
- SONET/SDH OC-192/STM-64 with and without FEC
- Driver for EAM, laser diode modules, transmission lines
- Test and Measurement equipment: Clock driver, buffer

Main Advantages

- Data rate up to 10.7 Gbit/s
- Industry's lowest power consumption of typical 1.5 W (for full voltage swing of 3 V)
- Suitable for driving both 50 Ω matched Electro-Absorption Modulators (EAM) as well as direct modulation of 50 or 25 Ω matched laser diodes. (for single or differential transmission lines)
- Adjustable output current swing up to 60 mA (3 V across 50 Ω)
- Pulse shape adjustment: Eye symmetry, duty cycle, output voltage undershoot
- Fully differential design
- Supply voltage of -5.2 V and +1.8 V
- Small chip size of 1.415 x 1.045 mm (bare die)

Packing

Type	Sales Code	Package
LDD	FOA21002A	Bare die

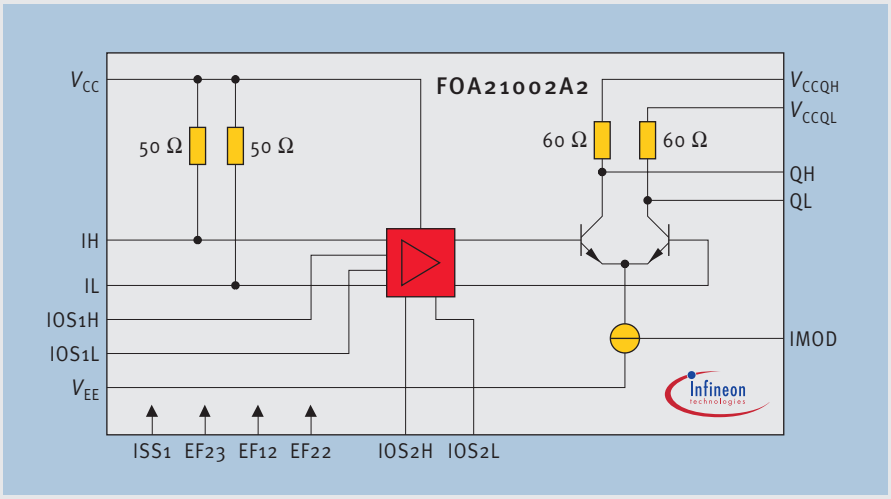
FOA21002A2

FOA21002A1 Laser Diode Driver
LDD 9.95 - 10.7 Gbit/s, -5.2 V

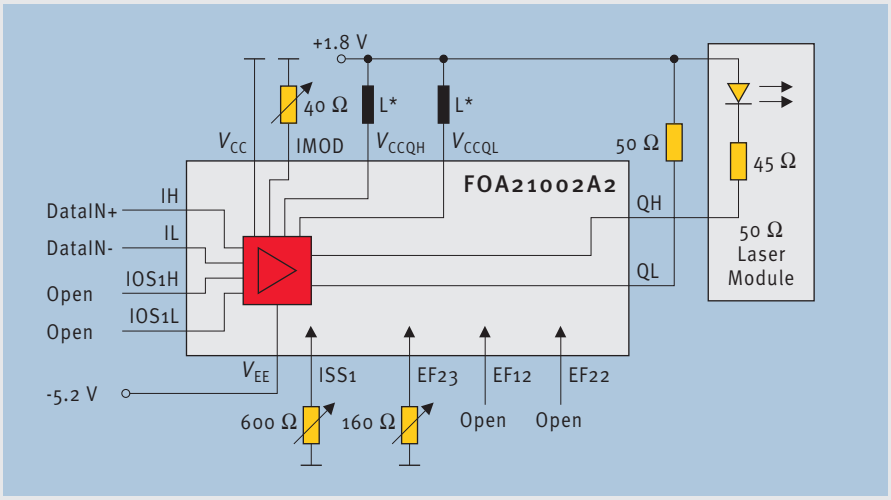
Infineon technologies

Never stop thinking.

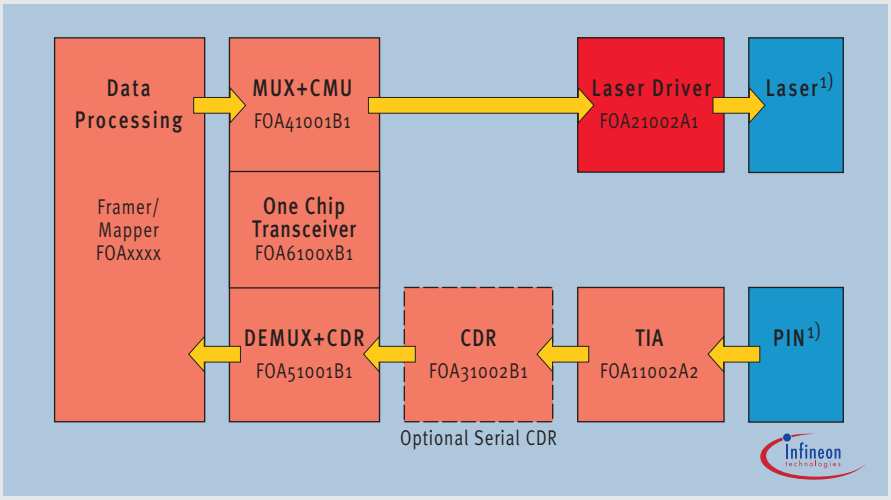
FOA21002A2 Block Diagram



Application Example



10 Gbit/s Chipset Overview



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