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M02096

2.5 Gbps, 3.3/5 V Laser Driver/Limiting Amplifier

The M02095 and M02096 are integrated laser drivers and limiting amplifiers for applications from 622 Mbps to 1.25 Gbps for the M02095 and up to 4.3 Gbps for the M02096. The laser driver modulation output can be AC or DC-coupled to an FP/DFB laser. The devices can operate from a 3.3 V or 5 V supply. The devices include monitors for bias and laser power. Integrated safety circuitry provides latched bias and modulation current shutdown if a fault condition is detected and provides an internal VCC switch. The limiting amplifier also includes a programmable signal-level detector, allowing the user to set thresholds at which the logic outputs are enabled. PECL or CML outputs are available on the limiting amplifier. Configuration logic provides flexibility in setting data path polarity, safety logic configuration, and LOS behavior.

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Features

- High speed operation; suitable for applications to 4.3 Gbps. 65 ps typical Tx rise/fall time into 25 ohm
- CML or PECL limiting amplifier outputs
- 3.3 mV typical input limiting amp sensitivity at 2.5 Gbps
- SFP compliant safety circuitry (configurable)
- Automatic Power Control
- Temperature compensation for modulation current
- Integrated power supply switch for redundant shutdown under a fault condition
- Modulation current to 85 mA and bias current to 100 mA
- Independently programmable bias and modulation currents
- Polarity Control for both the driver and limiting amplifier data paths
- Limiting amplifier includes integrated DC offset cancellation circuit
- Operates with 3.3 V or 5 V supply with an internal auto-sensing regulator.
- Powers 3.3 V ROSAs from its receiver regulator output enabling true 3.3/5 V designs using all

3.3 V Mindspeed TIAs

Specifications

- Max Data Rate: 4.3 Gbps
- Max Output Mod Current: 85 mA

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Part Number	Package	MACOM	Richardson RFPD
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M02096-12EVM			
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M02096-12 Evaluation Kit			
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M02096G-12			
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M02096G-12 CM MODE LASER DRIVER/LIMITING			
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5X5MM QFN-32LD

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