

VSC7965

PON Integrated 155 Mbps to 1.25 Gbps Burst-mode Laser Driver and Limiting Amplifier



APPLICATIONS:

- ▶ BPON, GE-PON, GPON burst-mode laser driver

SPECIFICATIONS:

- ▶ Package size: 5 mm x 5 mm QFN
- ▶ Maximum modulation = 80 mA
- ▶ Typical core power = 330 mW
- ▶ Operating temperature range = -40 °C to 100 °C

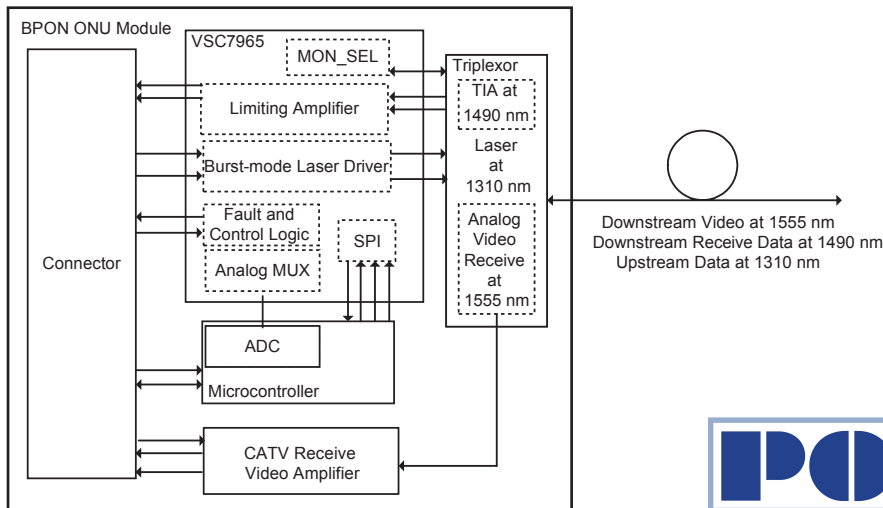
FEATURES:

- ▶ APC loop requires no initialization phase
- ▶ VSC7965 meets the specification for BPON, GE-PON, and GPON
- ▶ Burst enable input supports LVPECL, LVDS, and LVTTTL output levels
- ▶ Selectable resistance on monitor diode input
- ▶ Laser driver crossing point control
- ▶ Built-in eye safety support

BENEFITS:

- ▶ Laser driver is ready to transmit upon power up
- ▶ Allows the VSC7965 to be used in both PON and SFP module solutions
- ▶ Allows PON module to interoperate with multiple upstream devices
- ▶ Improves accuracy of the monitor diode input by allowing the user to select the resistance and capacitance in the input
- ▶ Enables the user to adjust the level of the crossing point on the laser driver output
- ▶ No external components are required to meet IEC-60825 eye safety specifications

APPLICATION DIAGRAM:



VSC7965

PON Integrated Burst-mode Laser Driver and Limiting Amplifier

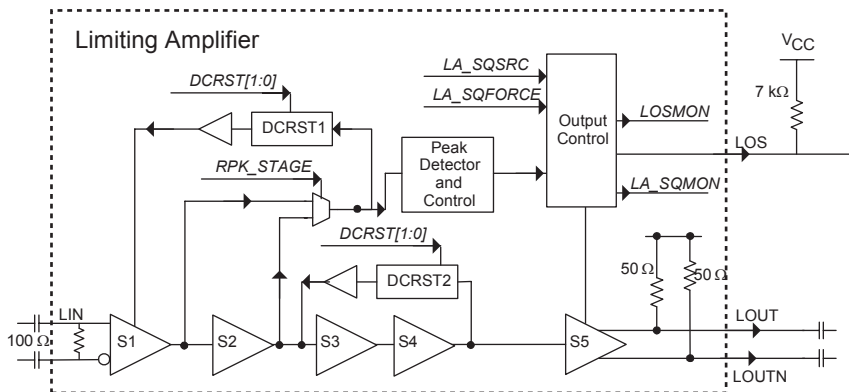
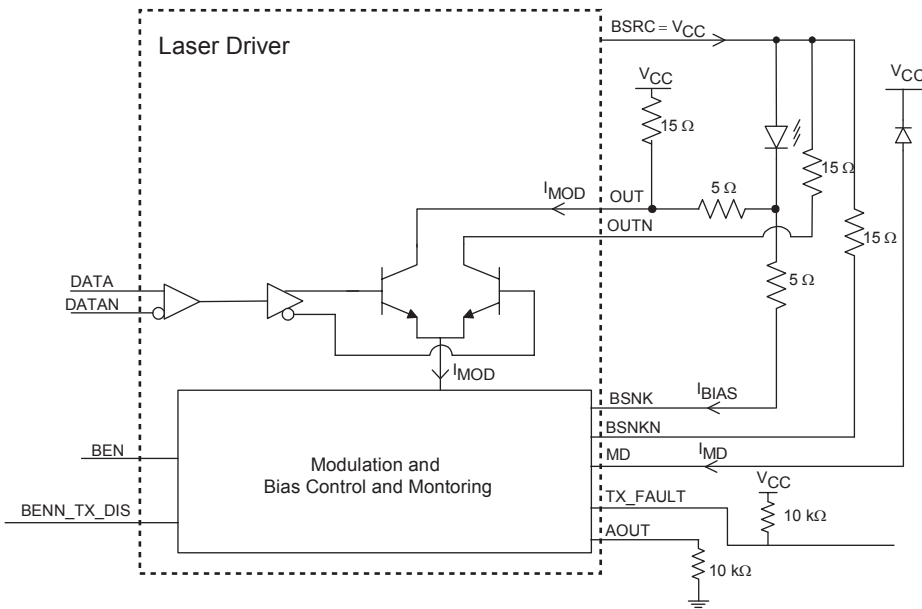
GENERAL DESCRIPTION:



The VSC7965 is a multirate 1.25 Gbps integrated laser driver and limiting amplifier for Passive Optical Network applications optimized to reduce module cost. The device is intended to drive distributed feedback (DFB) and Fabry Perot (FP) lasers. A standard SPI port is provided for programming integrated digital-to-analog converters for laser bias current, modulation

current, average power, and the limiting amplifier loss of signal threshold. The VSC7965 is equipped with SFP-compliant fault indicators, redundant disable control, Automatic Power Control, temperature sensor, various signal monitors, and robust eye safety features. The VSC7965 is available in a 5mm x 5mm 32-pin QFN plastic package.

BLOCK DIAGRAMS:



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