EL6243C

3-Channel Laser Diode Driver w/Oscillator & APC Amplifier

PRODUCT BRIEF

Features

- Shrink-Small Outline Package
- Voltage-controlled output current source requiring one external set resistor per channel
- Rise time = 0.8ns
- Fall time = 0.8ns
- On chip oscillator with frequency and amplitude control by use of external resistors to ground
- Oscillator to 500MHz
- Oscillator to 100mA pk/pk
- Single +5V supply (±10%)
- Disable feature for power-up protection and power savings
- Fast Settling APC Amplifier

Applications

- CD-RW applications
- Writable optical drives
- Laser diode current switching

Ordering Information

Part No.	Temp. Range	Package	Outline #
EL6243CU	0°C to +70°C	QSOP-24	MDP0040
EL6243CL	0°C to +70°C	LPP-24	MDP0046

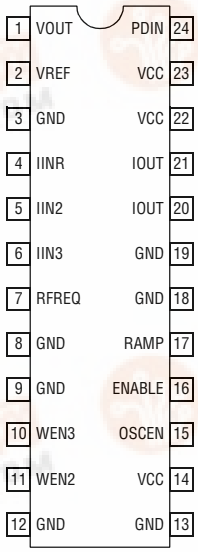
General Description

The EL6243C is a high-performance three channel laser driver that provides controlled current to a grounded laser diode. Write channels 2 and 3 should be used as the write channels, with switching speeds of approximately one nanosecond rise/fall time. All three channels are summed together at the I_{OUT} output, allowing the user to create multi-level waveforms in order to optimize laser diode performance. The level of the output current is set by an analog voltage applied to an external resistor which converts the voltage into a current at the I_{IN} pin (virtually ground). The current seen at this pin is then amplified to become a current source at pin I_{OUT}.

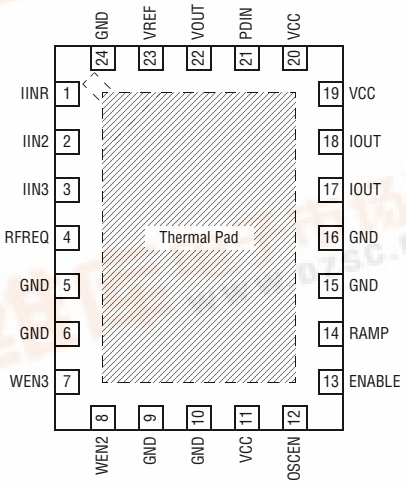
An on-chip 500MHz oscillator is provided to allow output current modulation when in any mode. This is turned on when the OSCEN pin is held high. Complete control of amplitude and frequency is set by two external resistors connected to ground at pins RFREQ and RAMP (see graphs in this data sheet for further explanation).

The EL6243C also includes a fast settling APC amplifier designed to interface directly with the front end monitor diode and the sample-and-hold amplifier for read and write power control. Its 100MHz bandwidth and 30ns settling time enable up to 16X CD-RW design.

Connection Diagrams



24-Pin QSOP



24-Pin LPP Top View

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Effective May 15, 2002, Elantec, a leader in high performance analog products, is now a part of Intersil Corporation.

All Intersil U.S. products are manufactured, assembled and tested utilizing ISO9000 quality systems.
Intersil Corporation's quality certifications can be viewed at www.intersil.com/design/quality

For information regarding Intersil Corporation and its products, see www.intersil.com

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