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MAX3701

2x Blue Laser Driver with Sample and Hold

2x Blue Laser Driver with Sample-and-Hold, Designed to Drive a Common-Cathode Laser for the Next Generation of High-Capacity Blue DVD Applications

Overview Technical Documents Ordering Info User Comments (0) All

Status

All versions are No Longer Available.

Data Sheet

No Longer Available

Description

The MAX3701 is a laser driver designed to drive a common-cathode laser for the next generation of high-capacity blue DVD applications. It includes a programmable current source for generating a laser bias current, and four programmable data channels for programming the write current levels. The MAX3701 also includes an RF current source with programmable frequency and amplitude control. The RF source, together with the bias generator, provides a disc read waveform. All programmable currents are internally summed together, and can be disabled from a single enable pin. A transimpedance amplifier and a sample-and-hold circuit are available to be used with a monitor photodiode as part of an optical power-control (OPC) loop.

Each of the four programmable inputs can contribute up to 200mA_{P-P} current with a total output current limit of 200mA into a blue laser diode. The four fast-switching channels accept single-ended CMOS, and can write at speeds as high as 400Mbps. The RF circuit delivers an output signal between 200MHz and 600MHz.

The MAX3701 is available in a 5mm x 5mm 32-pin thin QFN package.

Key Features

- For Read/Write Operation of Common-Cathode Blue Lasers
- 0.9ns Rise-Fall-Time
- Low-Noise Oscillator Output (1nA per $\sqrt{\text{Hz}}$)
- 200mA Maximum Output Drive Current
- No Active External Device Required
- Five-Level Output Programmability
- On-Chip Oscillator from 200MHz to 600MHz
- Single-Ended CMOS High-Speed Inputs
- Preamp and Sample and Hold for Optical Power Control
- CMOS/TTL Control Interface
- Low Supply Current
- Enable Control

Applications/Uses

- 1x High-Capacity Blue DVDs
- 2x High-Capacity Blue DVDs
- Blue Lasers
- High-Density Optical Drives

Technical Documents

App Note 2934 MAX3701: Interfacing the MAX3701 to a Blue/Violet Laser Diode [Application Brief]

Reliability Reports

Show FIT data for: MAX3701 Go

Request Reliability Report for: MAX3701 Go

Software/Models

none

Ordering Information

Filters: Part Number: Package: Any Temperature: Any ☐ Tape and Reel ☐ Sample Go

Part Number	Free Sample	Buy	Status	Package: TYPE PINS FOOTPRINT DRAWING CODE/VAR *	Temp	RoHS/Lead-Free? Materials Analysis
MAX3701CTJ		N/A	No Longer Available	TQFN;32 pin;26 mm ² Outline Drawing: 21-0140 (PDF) Land Pattern: 90-0012 (PDF) Use pkgcode/variation: T3255-4*	0°C to +70°C	RoHS/Lead-Free: No Materials Analysis
MAX3701CTJ+		N/A	No Longer Available	TQFN;32 pin;26 mm ² Outline Drawing: 21-0140 (PDF) Land Pattern: 90-0012 (PDF) Use pkgcode/variation: T3255+4*	0°C to +70°C	RoHS/Lead-Free: Lead Free Materials Analysis
MAX3701CTJ+T		N/A	No Longer Available	TQFN;32 pin;26 mm ² Outline Drawing: 21-0140 (PDF) Land Pattern: 90-0012 (PDF) Use pkgcode/variation: T3255+4*	0°C to +70°C	RoHS/Lead-Free: Lead Free Materials Analysis
MAX3701CTJ-T		N/A	No Longer Available	QFN;32 pin Land Pattern: Not Available	0°C to +70°C	See data sheet

Notes:

- Other options and links for purchasing parts are listed at: <http://www.maxim-ic.com/sales>.
- Didn't Find What You Need? Ask our applications engineers. Expert assistance in finding parts, usually within one business day.
- Part number suffixes: T or T&R = tape and reel; + = RoHS/lead-free; # = RoHS/lead-exempt; -D = drypack; -U/+U on DS parts = cut tape. More: See Full Data Sheet or Maxim Product Naming Conventions.
- * Some packages have variations, listed on the drawing. "PkgCode/Variation" tells which variation the product uses. Note that "+", "#", "-" in the part number suffix describes RoHS status. Package drawings may show a different suffix character.

More Information

New Product Press Release[2003-12-22]

Didn't Find What You Need?

Next Day Product Selection Assistance from Applications Engineers
Parametric Search
Applications Help

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