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Maxim MAX3603C Infrared Laser Diode Driver

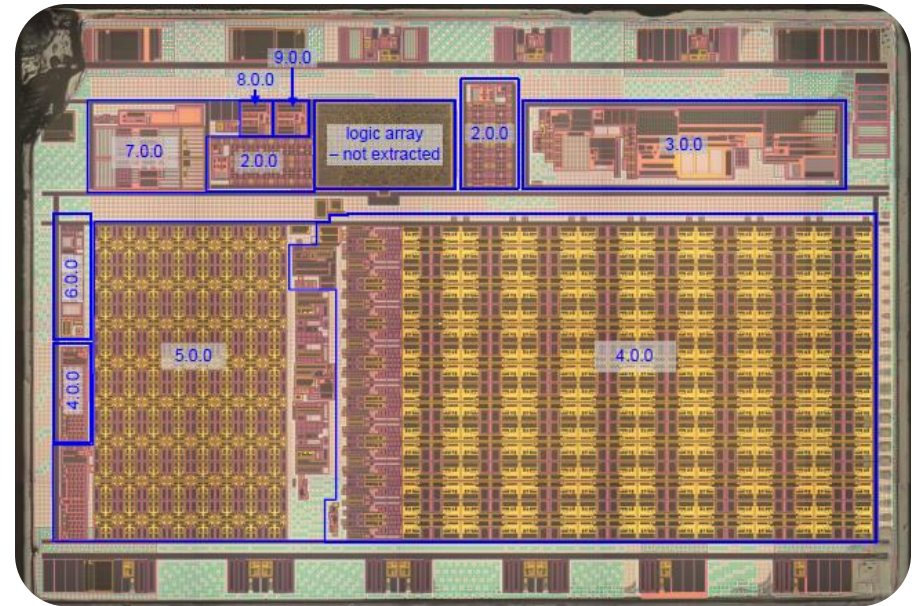
Full Analog Circuit Analysis Report

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April 2015

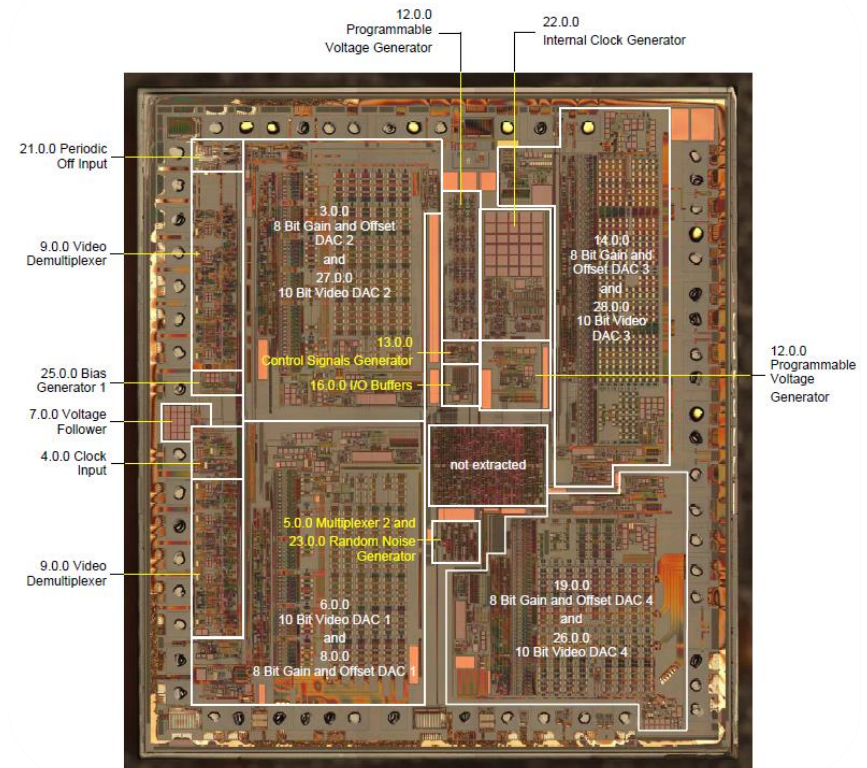
Maxim MAX3603C - Infrared Laser Diode Driver

- This report presents a Full Analog Circuit Analysis of the Maxim MAX3603C infrared (IR) laser diode driver (LLD). The MAX3603C comes in a 24-pin wafer level packaging (WLP) and uses a four metal, single poly layer, 0.18 μm technology.
- Chipworks also offers a Circuit Analysis report on a similar Maxim laser diode driver, the MAX3600CTL+
- This full analog Circuit Analysis Report presents the following functional blocks of the device:
 - 32-Bit Data Buffer (Schematic 2.0.0)
 - Reference Generator (Schematic 3.0.0)
 - DAC 1 (Schematic 4.0.0)
 - DAC 2 (Schematic 5.0.0)
 - Detector (Schematic 6.0.0)
 - Power Sequencer (Schematic 7.0.0)
 - Test Decoder 1 and 2 (Schematic 8.0.0 and Schematic 9.0.0)
 - Input Buffer (Schematic 10.0.0 and Schematic 11.0.0)
 - ESD Protection and Power Clamps (Schematic 12.0.0 to Schematic 19.0.0)



Maxim MAX3600CTL - Laser Driver for Projectors

- The MAX3600 is a 3 channel RGB laser driver that enables the integration of high resolution pico projectors into small form factor applications. Fabricated using Maxim's BiCMOS process, this device achieves very fast switching times of < 2 ns to support high-resolution images up to 1080p (1920 x 1080 pixels) and WXGA (1400 x 768 pixels). Additionally, it eliminates the need for three discrete laser drivers, thus enabling system designers to embed pico projectors into a new class of consumer electronics. For operations with synthetic green lasers, the driver includes a periodic off function and a fourth output with a random noise generator¹.
- The MAX3600 is considered to be the industry's first triple laser driver for pico RGB projectors. It comes with a reduced PCB footprint of 5 mm x 5 mm and a 40 pin TQFN-EP package that is both lead (Pb) free and ROHS compliant.



Maxim MAX3603C Laser Diode Driver

List of Reports

Chipworks Reports	Date	Links
Maxim MAX3603C Infrared Laser Diode Driver Full Analog Circuit Analysis (CAR-1411-902)	Available	Chipworks e-Store »
		Table of Contents »
Maxim MAX3600CTL Laser Driver for Projectors Circuit Analysis (CAR-1005-808)	Available	Chipworks e-Store »
		Table of Contents »

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