

## MAX5110

# 9-Channel, 14-Bit Current DAC with SPI Interface

*Industry's First Multichannel Current-Output DAC Optimized to Bias Fiber Optic Tunable Laser Sources*

## Status

Active: Data sheet on request only

## Data Sheet

[Request Full Data Sheet](#)  
Custom Order

## Description

The MAX5110 is a 14-bit, 9-channel, current output digital-to-analog converter (DAC). The device operates from a low +3.0V power supply and provides 14-bit performance without any adjustment.

The device's output ranges are optimized to bias a high-power tunable laser source. Each of the 9 channels provides a current source. Connect DAC outputs in parallel to obtain additional current or to achieve higher resolution. The MAX5110 contains an internal reference.

An SPI™ interface drives the device with clock rates up to 25MHz. An active-high asynchronous CLR input resets DAC codes to zero independent of the serial interface. The device provides a separate power-supply input for driving the interface logic.

The MAX5110 is specified over a temperature range of -40°C to +105°C and are available in 3mm x 3mm 36-WLP and 5mm x 5mm 32-TQFN packages.

An evaluation board is available: [MAX5110EVKIT](#)

## Key Features

- Low 3.0V Supply
- Integrated Multiplexers for Outputs 1 and 2
- Increased Current or Resolution with Outputs Connected in Parallel
- SPI-Compatible Serial Interface
- Internal Reference
- Overtemperature Protection
- Operates Over the -40°C to +105°C Temperature Range
- Available in 36-Bump WLP or 32-Pin TQFN Packages

## Applications/Uses

- Tunable Laser Diode Biasing

## Technical Documents

App Note 4862 [Reserved or "Don't Care" Bit Programming in the MAX5110/MAX5111 Multichannel DACs](#)

## Product Guides

[Signal Chain](#) (PDF)

## Reliability Reports

Reliability Report: [MAX5110.pdf](#)

## Ordering Information

| Part Number      | Free Sample | Buy | Status                             | Package:<br>TYPE PINS FOOTPRINT<br>DRAWING<br>CODE/VAR *           | Temp            | RoHS/Lead-Free?<br>Materials Analysis                        |
|------------------|-------------|-----|------------------------------------|--|-----------------|--|
| MAX5110GTJ+      |             |     | Active: Data sheet on request only | TQFN;32 pin;26 mm <sup>2</sup><br><a href="#">Package Details</a>  | -40°C to +105°C | RoHS/Lead-Free: <a href="#">Lead Free Materials Analysis</a> |
| MAX5110GTJ+G074  |             |     | Active: Data sheet on request only | QFN;<br><a href="#">Package Details</a>                            | -40°C to +105°C | See data sheet   |
| MAX5110GTJ+T     |             |     | Active: Data sheet on request only | TQFN;32 pin;26 mm <sup>2</sup><br><a href="#">Package Details</a>  | -40°C to +105°C | RoHS/Lead-Free: <a href="#">Lead Free Materials Analysis</a> |
| MAX5110GTJ+TG074 |             |     | Active: Data sheet on request only | TQFN;32 pin;26 mm <sup>2</sup><br><a href="#">Package Details</a>  | -40°C to +105°C | RoHS/Lead-Free: <a href="#">Lead Free Materials Analysis</a> |
| MAX5110GWX+      |             |     | Active: Data sheet on request only | WLP;36 pin;10.1 mm <sup>2</sup><br><a href="#">Package Details</a> | -40°C to +105°C | RoHS/Lead-Free: <a href="#">Lead Free Materials Analysis</a> |
| MAX5110GWX+T     |             |     | Active: Data sheet on request only | WLP;36 pin;10.1 mm <sup>2</sup><br><a href="#">Package Details</a> | -40°C to +105°C | RoHS/Lead-Free: <a href="#">Lead Free Materials Analysis</a> |
| MAX5110GWX+TG074 |             |     | Active: Data sheet on request only | WLP;36 pin;10.1 mm <sup>2</sup><br><a href="#">Package Details</a> | -40°C to +105°C | RoHS/Lead-Free: <a href="#">Lead Free Materials Analysis</a> |

Notes:

- Other options and links for purchasing parts are listed at: <http://www.maximintegrated.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.

## Similar Products by Function

[MAX5111](#) 9-Channel, 14-Bit, Current DAC with I<sup>2</sup>C Interface

## Evaluation Kits

[MAX5110EVKIT](#) Evaluation Kit for the [MAX5110](#)

## Products with Similar Part Numbers

[MAX5110EVKIT](#) Evaluation Kit for the [MAX5110](#)

## Didn't Find What You Need?

- [Next Day Product Selection Assistance from Applications Engineers](#)
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