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POWER X
博尔芯半导体科技

PXS7012FLRQ1

12-Channel High-side Switches
65V, 4A

1 Features

- Max 4A peak current for each channel
- Low channel on resistance (3Ω typical)
- Wide input voltage range from 0 to 65V
- Bidirectional analog switch supporting analog multiplexer or demultiplexer
- Single 5V supply
- Less than 100μA quiescent current
- Excellent channle isolation (56dB at 10MHz)
- Support channel switching rate up to 5MHz
- Configurable channel-selection mode:
  1. on-chip decoder;
  2. arbitrary channel selection through on-chip SPI;
  3. arbitrary channel selection through external channel control
- Configurable control for output capacitor discharge
- Chip enable (CE) control for chip selection and address expansion
- TTL and CMOS Compatible Inputs
- Input peak voltage detection
- under voltage lockout (UVLO) and over-temperature protection (OTP)
- LGA 4.7*3.3mm Package Size

2 Applications

- 1D/2D Addressable VCSEL Driver
- High Voltage Analog Switch

3 Description

The PXS7012FLRQ1 is a 12-Channel high-side switch that drives 1D/2D arrays. PXS7012FLRQ1 operates from a single 5V power supply and accommodates 1.8V-5V for digital IOs. It does not require dedicated high-voltage power supplies, resulting in cost-saving and system simplification. PXS7012FLRQ1 can operate effectively with 0V~65V input, with a low Ron (3Ω typical) and a maximum drive strength of 4A, which enable the driving of lasers while minimizing heat dissipation. 56dB isolation is observed for disabled channels with 10MHz input.

Channels in PXS7012FLRQ1 can be selected through an on-chip decoder (1 out of 12 selection). They can also be individually selected through a fast-speed on-chip SPI or direct 12-bit external control signals. PXS7012FLRQ1 supports laser driving with a channel switching rate up to 5MHz. Optional control to discharge the output load capacitors of all channels is available. The PXS7012FLRQ1 also features input peak voltage detection, UVLO and OTP for improved system robustness.

The PXS7012FLRQ1 is available in LGA 4.7*3.3mm package, which minimize parasitic inductance and board size.

Typical Application Diagram