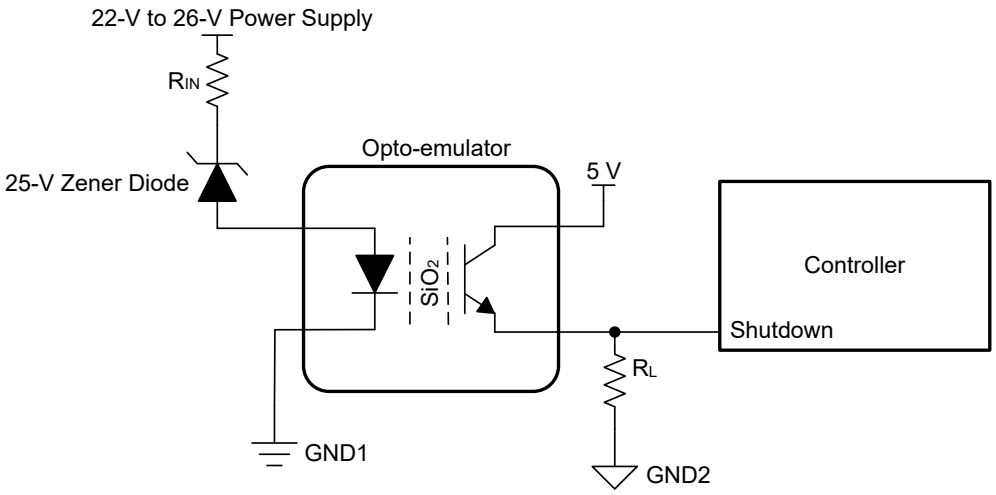
Product Overview

Isolated Secondary-Side Overvoltage Protection Using Opto-emulators



Example Isolated Secondary-Side Overvoltage Protection Circuit

- Opto-emulators are pin-to-pin drop-in replacements for traditional optocoupler solutions
- Analog transistor output opto-emulators can be used to help monitor power supplies for overvoltage events
- In this circuit, the opto-emulator protects the controller from harmful high-voltage transients
  - This allows the controller to safely monitor the power supply for overvoltage events
  - The breakdown voltage of the Zener diode is used to set the voltage threshold at which the controller can detect an overvoltage event
- [FAQ] What are the benefits of Opto-emulators vs. Optocouplers? TI E2E support forums
- [FAQ] Opto-emulators - Top Questions, Answered TI E2E support forums
- Opto-emulators explained: Why you should upgrade your optocoupler technology
- Opto-emulators | TI.com

Need additional assistance? Ask our engineers a question on the *TI E2E™ Isolation Support Forum*.

Analog Output Opto-emulators

Catalog Part Number	Automotive Part Number	Input Type	Output Type	V_F (MAX)	CTR	Pin-to-Pin Optocouplers
ISOM8110	ISOM8110-Q1	DC Input	Open Collector	1.4V	100% to 155%	HCPL-181 ACPL-217 LTV356T LTV357T TLP185 TLP181 PS2701A PS2811-1 EL816 EL3H7 and more
ISOM8111	ISOM8111-Q1			1.4V	150% to 230%	
ISOM8112	ISOM8112-Q1			1.4V	255% to 380%	
ISOM8113	ISOM8113-Q1			1.4V	375% to 560%	
ISOM8115	ISOM8115-Q1	Bidirectional DC Input		1.5V	100% to 155%	
ISOM8116	ISOM8116-Q1			1.5V	150% to 230%	
ISOM8117	ISOM8117-Q1			1.5V	255% to 380%	
ISOM8118	ISOM8118-Q1			1.5V	375% to 560%	

To find a pin-to-pin alternative to the optocouplers in your design, search TI's *cross reference tool*.

For more opto-emulators, browse through the *online parametric tool*.

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