

**Photovoltaic Isolator
 Solid-State
 Opto-Isolated MOSFET Gate Driver
 Dual-Channel, 5V, 1.0μA**

General Description

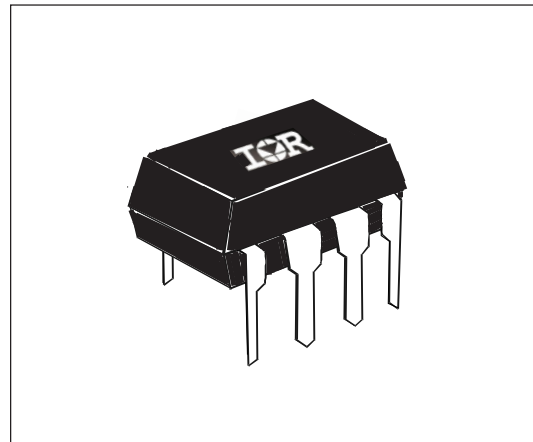
The PVI5013R Photovoltaic Isolator is a dual-channel, opto-isolated driver capable of directly driving gates of power MOSFETs or IGBTs. It utilizes a monolithic integrated circuit photovoltaic generator of novel construction as its output. The output is controlled by radiation from a GaAlAs light emitting diode (LED) which is optically isolated from the photovoltaic generator.

The PVI5013R is ideally suited for applications requiring high-current and/or high voltage switching with optical isolation between the low-level driving circuitry and high-energy or high-voltage load circuits. It can be used for directly driving gates of power MOSFETs. The dual-channel configuration allows its outputs to drive independent discrete power MOSFETs, or be connected in parallel or in series to provide higher-current drive for power MOSFETs or higher-voltage drive for IGBTs. PVI5013R employs a fast turn-off circuitry.

PVI5013R Photovoltaic Isolators are packaged in an 8-pin, molded DIP package with either thru-hole or surface-mount (gull-wing) terminals. It is available in standard plastic shipping tubes or on tape-and-reel. Please refer to Part Identification information opposite.

Features

- Monolithic construction
- 3,750 V_{RMS} I/O Isolation
- 1,200 V_{DC} output-to-output isolation
- Dual-Channel application flexibility
- Solid-State reliability
- UL recognized and BABT Certified



Applications

- Telecommunications
- Load Distribution
- Industrial Controls
- Instrumentation and Measurement

Part Identification

PVI5013RPbF	thru-hole
PVI5013RSPbF	surface-mount
PVI5013RS-TPbF	surface-mount, Tape and Reel

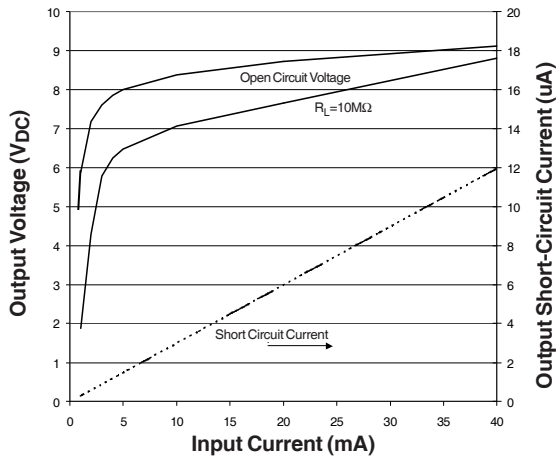


Figure 1. Typical Output Characteristics

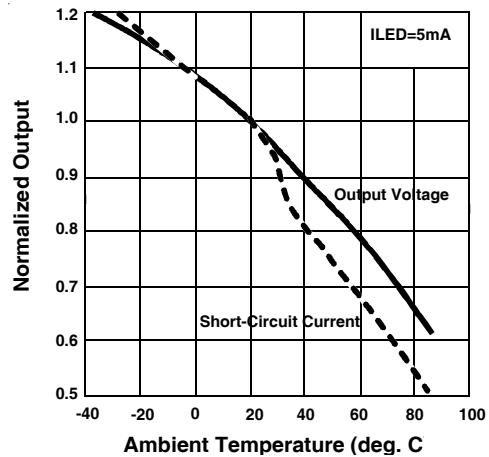


Figure 2. Typical Variation of Output

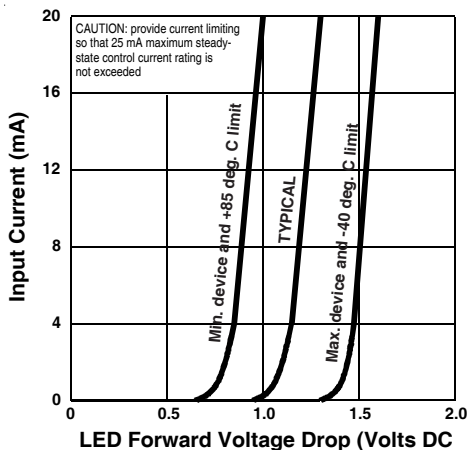


Figure 3. Input Characteristics (Current Controlled)

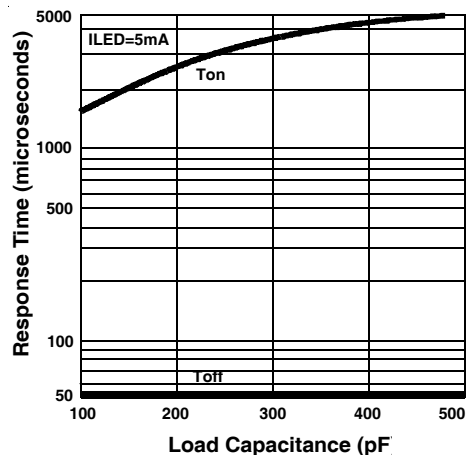
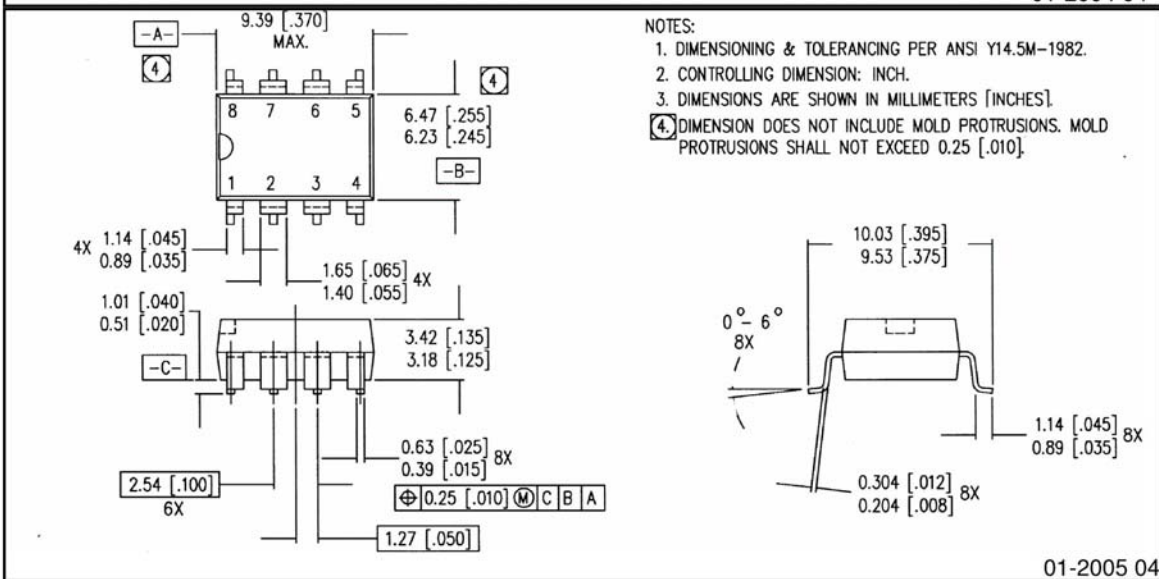
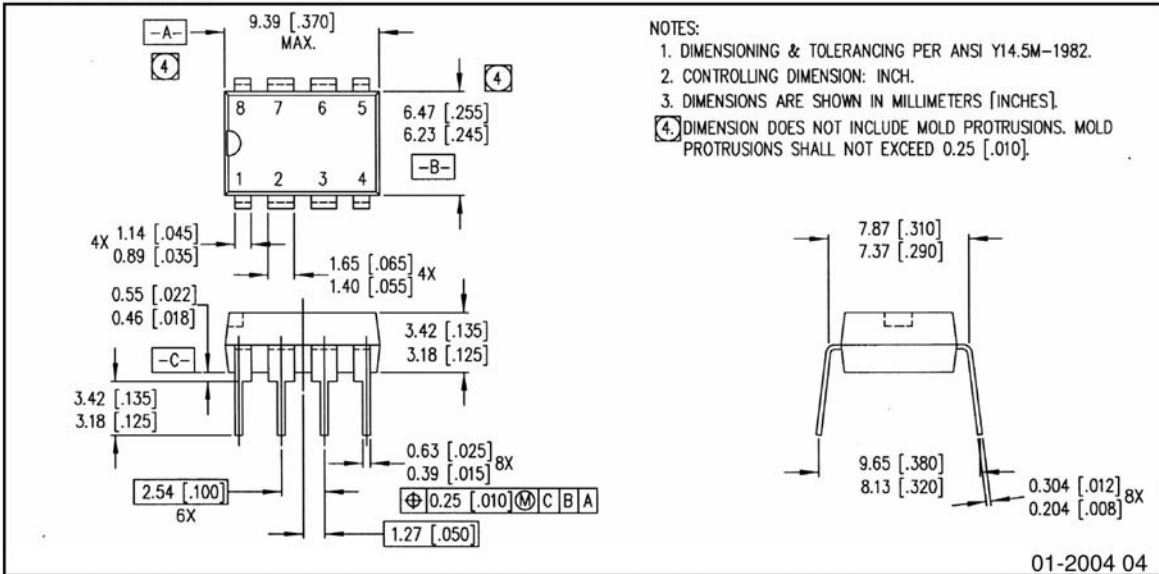


Figure 4. Typical Response Time

Case Outlines



Note: For the most current drawing please refer to IR website at: <http://www.irf.com/package/>



Qualification information[†]

Qualification level	Indusrid (per JEDEC JESD471 ^{††} guidelines)	
Moisture Sensitivity Level	PVI5013RPbF	N/A
	PVI5013RSPbF	MSL4 (per JEDEC J-STD-020E & JEDEC J-STD-033C ^{††})
	PVI5013RS-TPbF	
RoHS compliant	Yes	

† Qualification standards can be found at International Rectifier’s web site <http://www.irf.com/product-info/reliability>

†† Applicable version of JEDEC standard at the time of product release.

Revision History

Date	Comment
4/24/2015	<ul style="list-style-type: none">• Added Qualification Information table on page 5.• Updated data sheet based on corporate template.



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To contact International Rectifier, please visit <http://www.irf.com/whoto-call/>

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