Electrical Specifications (-40°C ≤ T_A ≤ +85°C unless otherwise specified)

INPUT CHARACTERISTICS	PVI Series	Units
Input Current Range (see figure 4)	2.0 to 50	mA (DC)
Maximum Forward Voltage Drop @ 10mA, 25°C (see figure 5)	1.4	V (DC)
Maximum Reverse Voltage	6.0	V(DC)
Maximum Reverse Current @ -6.0V (DC), 25°C	100	µA(DC)
Maximum Pulsed Input Current @ 25°C (see figure 6)	1.0	A(peak)

OUTPUT CHARACTERISTICS	PVI Series	Units
Maximum Forward Voltage @ 10µA	8.0 per channel	$V_{(DC)}$
Maxiumum Reverse Current @ -10VDC	10	µA(DC)

COUPLED CHARACTERISTICS	PVI5050N	PVI5080N	PVI1050N	Units
Minimum Open Circuit Voltage @ ILED = 10mA, 25°C, RL = >10MΩ (see figures 1 to 2)	5.0		5.0/channel 10 series	V (DC)
Minimum Short Circuit Current @ ILED = 10mA, 25°C (see figures 1 to 2)	5.0	8.0	5.0 /channel 10 parallel	µA (DC)
Maximum Capacitance (Input/Output)	1.0		2.0	pF
Maximum Ton Time @ ILED=10mA, CLOAD=10pF (See Figure7)				
RL>20MΩ	300			µS
RL=10MΩ	160			µS
RL=4.7MΩ	90			µS
Maximum Toff Time @ ILED=10mA, CLOAD=10pF (See Figure7)	220			µS

GENERAL CHARACTERISTICS	PVI5050N/5080N	PVI1050N	Units
Min. Dielectric Strength, Input-Output	4000	2500	V_{RMS}
Min. Dielectric Strength, Output-to-Output	1200		V_{DC}
Min. Insulation Resistance, Input-to-Output @T_A=+25°C, 50%RH, 100V_{DC}	10^{12}		Ω
Max. Pin Soldering Temperature (10 seconds max.)	+260		°C
Ambient Temperature Range: Operating	-40 to +85		°C
Storage	-40 to +125		°C

International Rectifier does not recommend the use of this product in aerospace, avionics, military or life support applications. Users of this International Rectifier product in such applications assume all risks of such use and indemnify International Rectifier against all damages resulting from such use.

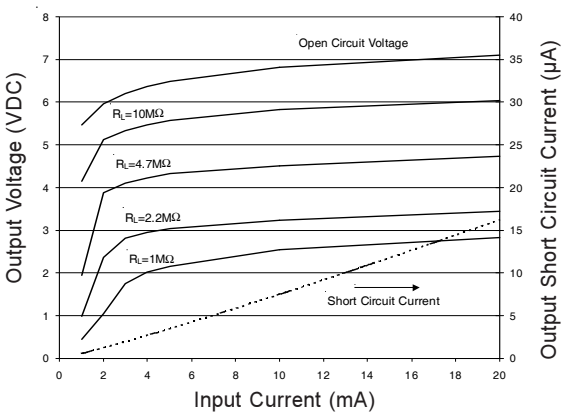


Figure 1. PVI5050N, PVI1050N Typical Output Characteristics

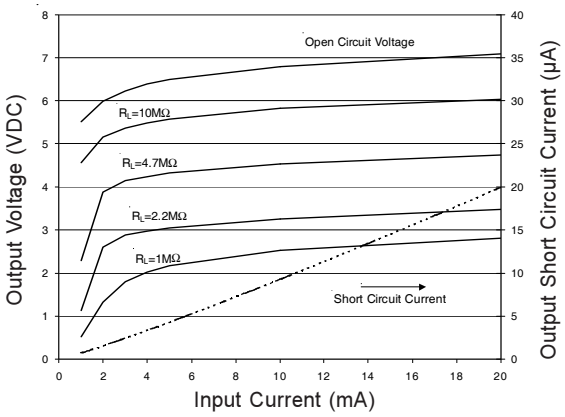


Figure 2. PVI5080N Typical Output Characteristics

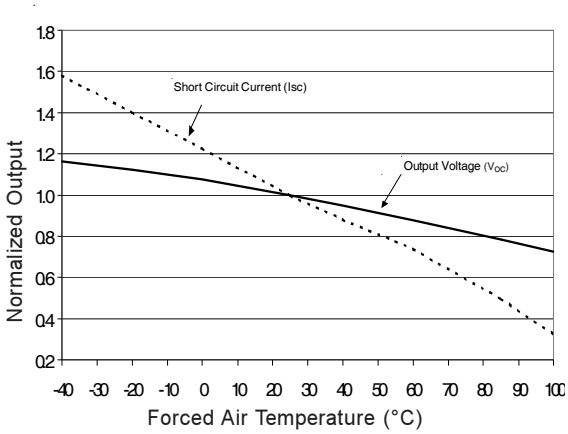


Figure 3. Typical Variation of Output

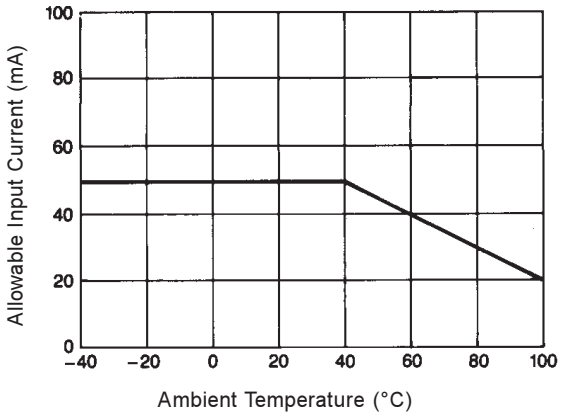


Figure 4. Input Current Derating

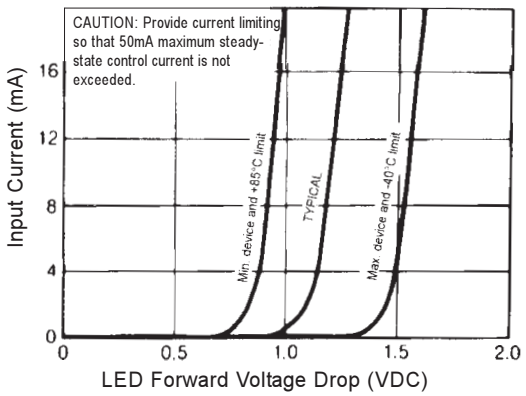


Figure 5. Input Characteristics

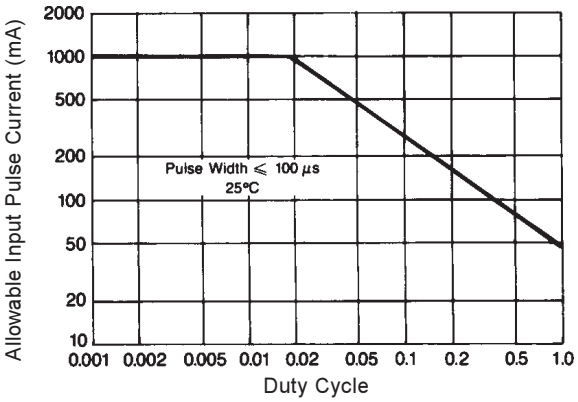


Figure 6. Input Pulse Capability

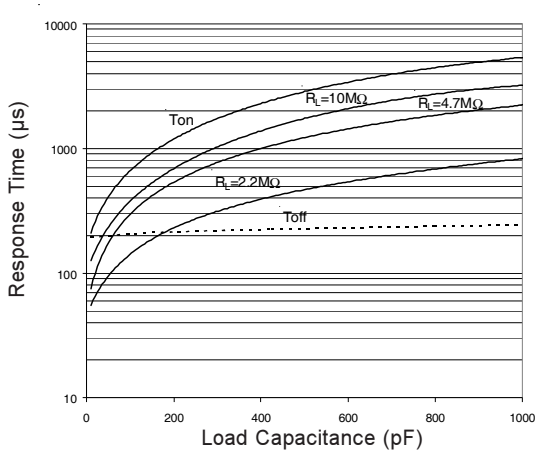
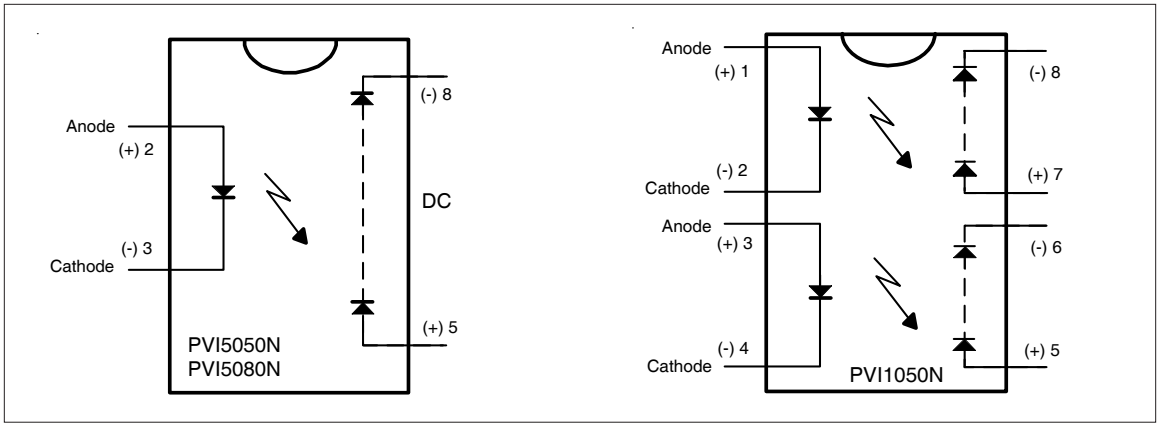


Figure 7. Typical Response Time

Wiring Diagram

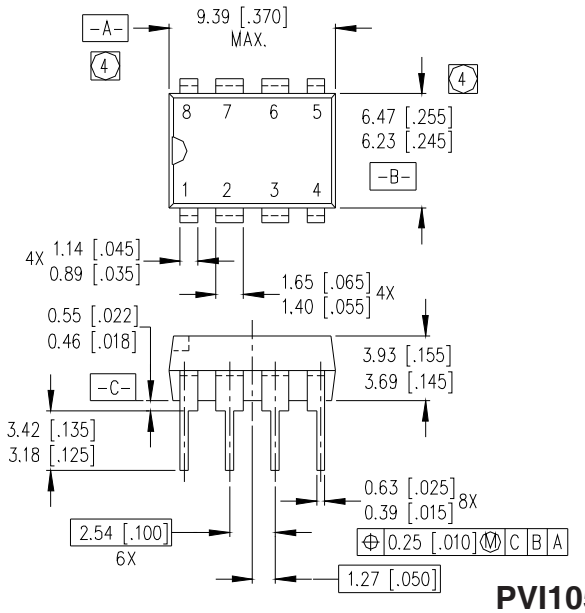


Application Note:

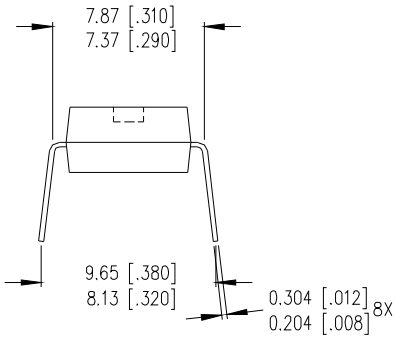
The outputs of the PVI1050N (pins 5-6 and 7-8) may be placed in series connection to produce a 10-volt output with a 5µA minimum short circuit current. Alternatively, the two ouptut of the PVI1050 may be connected in parallel to produce a 5.0-volt ouput with a 10µA minimum short circuit current.

The two outputs of the PVI1050N may be applied separately with a maximum 1200VDC between the outputs. Input-to-output isolation to either output is 2500V (RMS).

Case Outlines



NOTES:
1. DIMENSIONING & TOLERANCING PER ANSI Y14.5M-1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
4. DIMENSION DOES NOT INCLUDE MOLD PROTRUSIONS. MOLD PROTRUSIONS SHALL NOT EXCEED 0.25 [.010].
5. PRODUCTS AFFECTED: PVI1050N, PVT322, PVT322A, PVT422, PVI5013R AND PVI5033R.



PVI1050N

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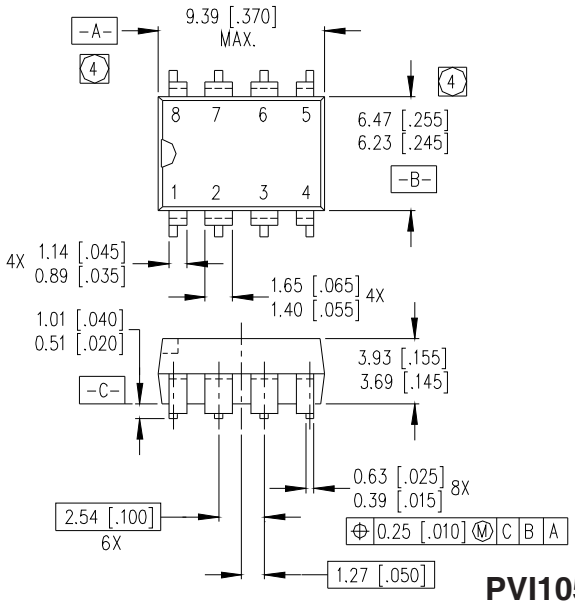

NOTES:
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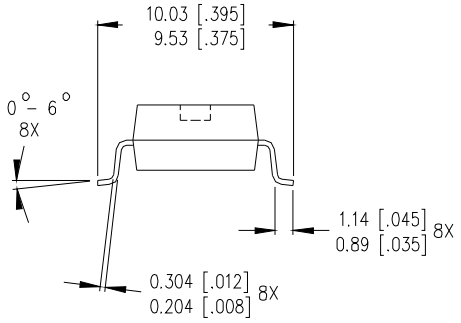
2. CONTROLLING DIMENSION: INCH.
3. DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
4. DIMENSION DOES NOT INCLUDE MOLD PROTRUSIONS. MOLD PROTRUSIONS SHALL NOT EXCEED 0.25 [.010].
5. PRODUCTS AFFECTED: PVI1050NS, PVT322S, PVT322AS, PVT422S, PVI5013RS AND PVI5033RS.

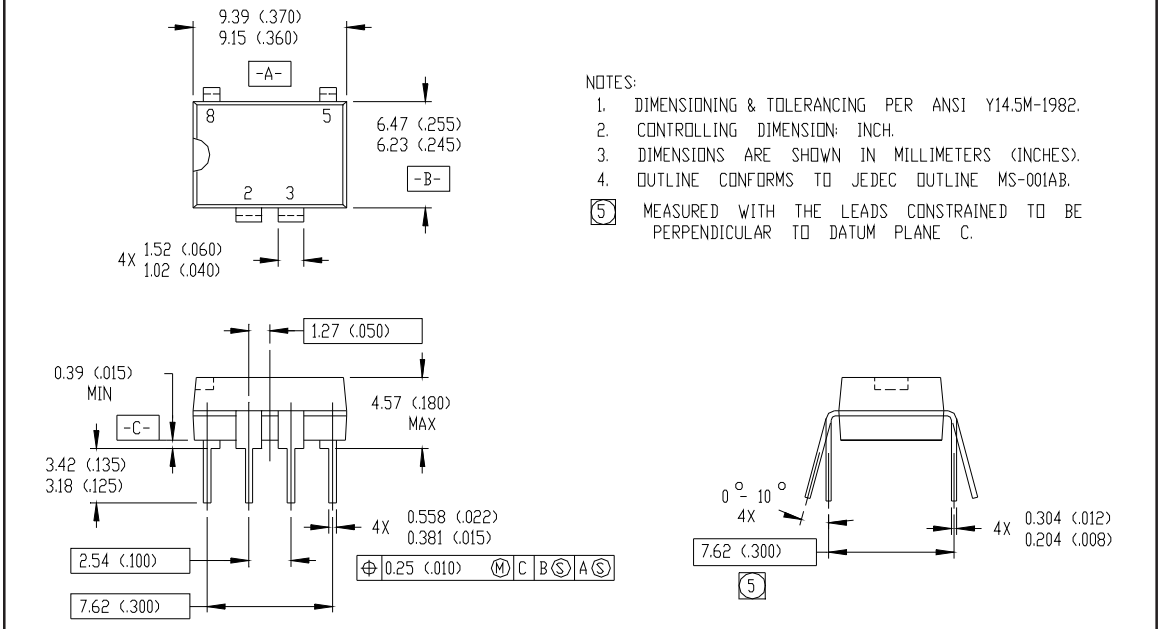


PVI1050NS

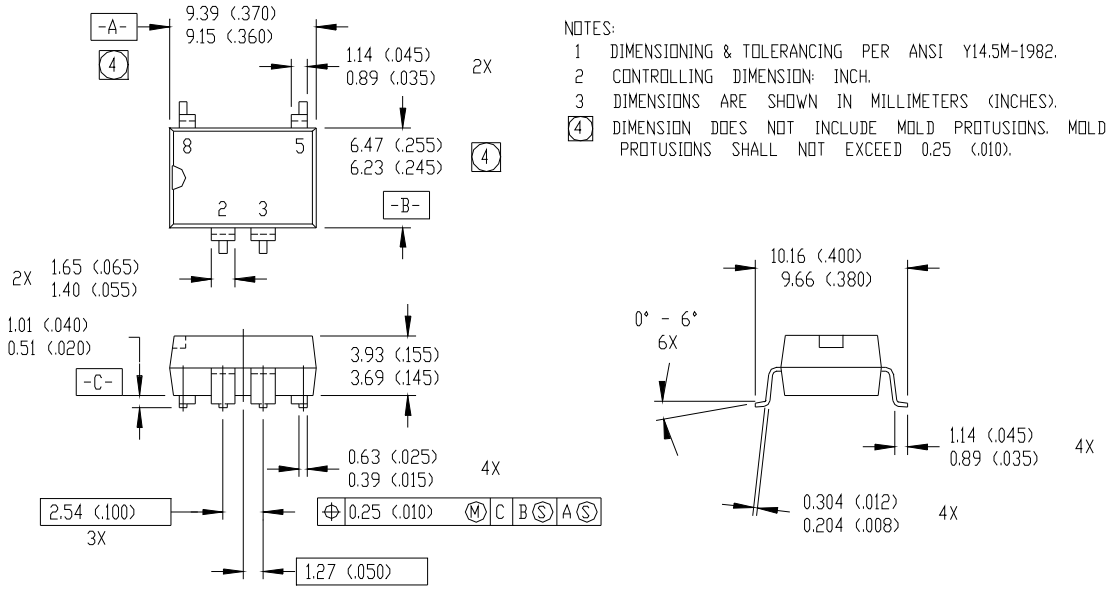
01-2031 01

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

Case Outlines



PVI5050N/PVI5080N 01-2013 00 (MS-001AB)



PVI5050NS/PVI5080NS 01-2019 00

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

Qualification information†

Qualification level	Industrial (per JEDEC JESD47I†† guidelines)	
Moisture Sensitivity Level	PVI1050NPbF	N/A
	PVI5050NPbF	
	PVI5080NPbF	
	PVI1050NSPbF	MSL4 (per JEDEC J-STD-020E & JEDEC J-STD-033C ††)
	PVI5050NSPbF	
	PVI5080NSPbF	
	PVI1050NS-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	• Added Qualification Information table on page 7. • Updated data sheet based on corporate template.

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