

**Electrical Specifications** ( $-40^{\circ}\text{C} \leq T_A \leq +85^{\circ}\text{C}$  unless otherwise specified)

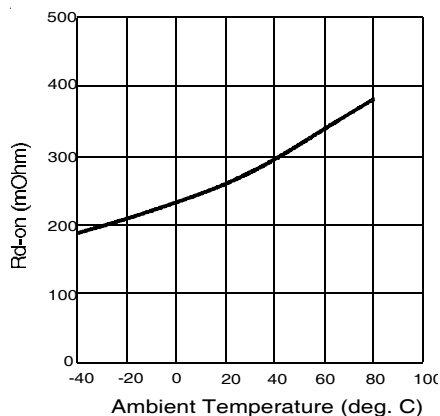
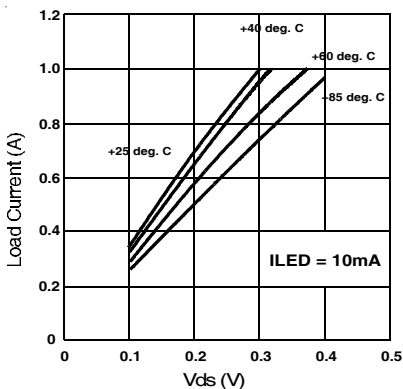
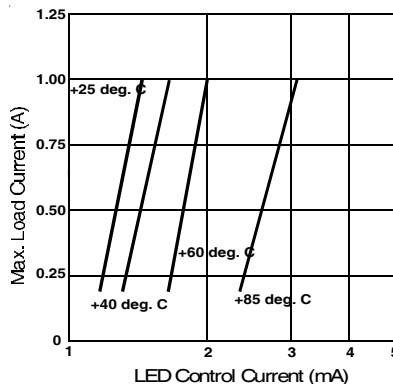
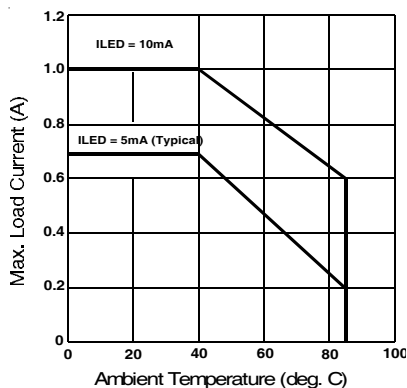
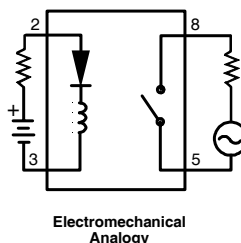
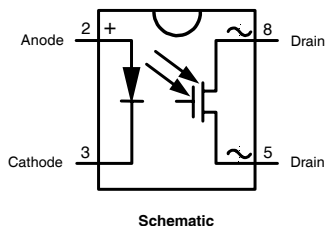
INPUT CHARACTERISTICS	Limits	Units
Min. Control Current (see figures 1 and 2)	10	mA
Max. Control Current for Off-State Resistance @ $T_A=+25^{\circ}\text{C}$	0.4	mA
Control Current Range (Caution: Current limit input LED, see figure 6)	5.0 to 25	mA
Maximum Reverse Voltage	6.0	V

OUTPUT CHARACTERISTICS		
Operating Voltage Range	0 to 60	V(AC peak)
Maximum Load Current $40^{\circ}\text{C}$ (see figures 1 and 2)	1.0	A (DC)
Maximum Pulsed Load Current @ $T_A=+25^{\circ}\text{C}$ (100 ms @ 10% duty cycle)	2.4	A (AC peak)
Maximum Turn-On Time @ $T_A=+25^{\circ}\text{C}$ (see figure 7) For 500mA, 50VDC Load, 10mA Control	2.0	ms
Maximum Turn-Off Time @ $T_A=+25^{\circ}\text{C}$ (see figure 7) For 500mA, 50VDC Load, 10mA Control	0.5	ms
Maximum On State Resistance @ $T_A=+25^{\circ}\text{C}$ (pulsed) (See figure 4) 1.0A Load, 10mA Control	500	m $\Omega$
Minimum Off State Resistance @ $T_A=+25^{\circ}\text{C}$ @ 48 VDC (see figure 5)	$10^8$	Ohms
Minimum Off-State dv/dt	1000	V/ $\mu\text{s}$
Output Capacitance (see figure 9)	150	pF @ 50 VDC

GENERAL CHARACTERISTICS		Limits	Units
Dielectric Strength, Input-Output		4000	V <sub>(RMS)</sub>
Insulation Resistance, Input-Output , 90 V <sub>DC</sub>		$10^{12}$ @ $T_A=+25^{\circ}\text{C}$ - 50% RH	$\Omega$
Capacitance, Input-Output		1.0	pF
Lead Temperature (1.6mm below seating plane) for 10 seconds		+260	$^{\circ}\text{C}$
Ambient Temperature Range:	Operating	-40 to +85	$^{\circ}\text{C}$
	Storage	-40 to +100	$^{\circ}\text{C}$

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.

# Wiring Diagrams:



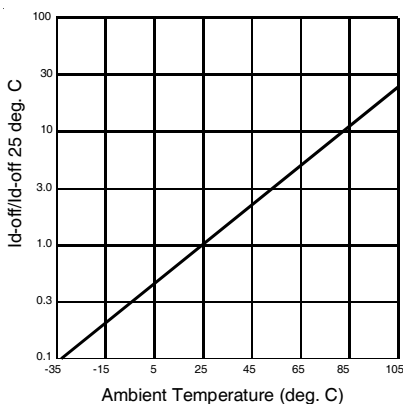


Figure 5. Typical Normalized Off-State Leakage

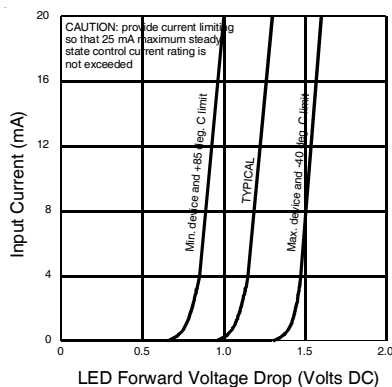


Figure 6. Input Characteristics (Current Controlled)

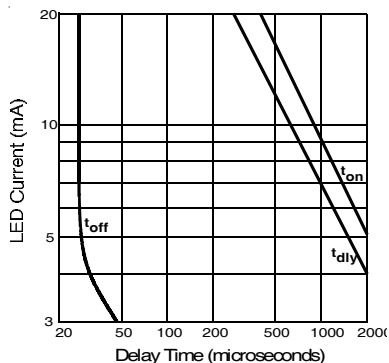


Figure 7. Typical Delay Times

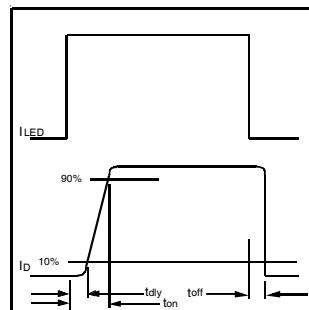


Figure 8. Delay Time Definitions

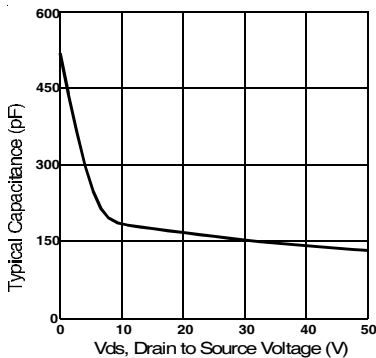
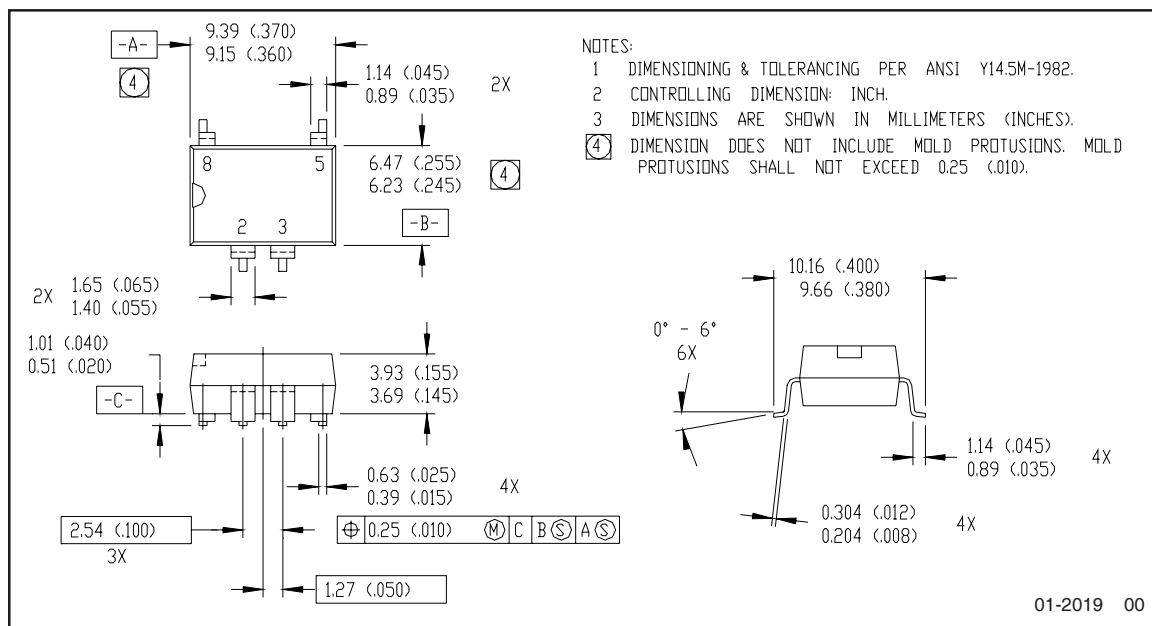
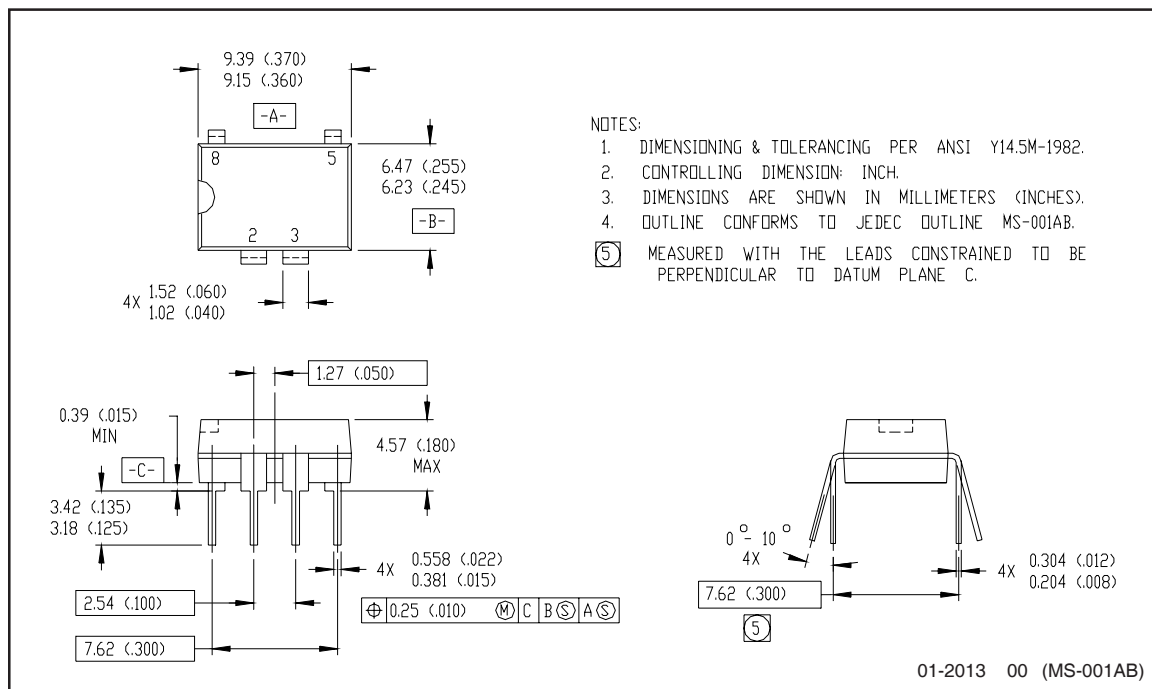


Figure 9. Typical Output Capacitance

# Case Outline



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

### Qualification information<sup>†</sup>

Qualification level	Industrial (per JEDEC JESD47I <sup>††</sup> guidelines)	
Moisture Sensitivity Level	PVAZ172NPbF	N/A
	PVAZ172NSPbF	MSL4
	PVAZ172NS-TPbF	(per JEDEC J-STD-020E & JEDEC J-STD-033C <sup>††</sup> )
RoHS compliant	Yes	

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

<sup>††</sup> Applicable version of JEDEC standard at the time of product release

### Revision History

Date	Comments
4/29/2015	<ul style="list-style-type: none"> <li>Added Qualification Information Table on page 6</li> <li>Updated data sheet with new IR corporate template</li> </ul>

International  
 Rectifier

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Data and specifications subject to change without notice

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