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

INPUT CHARACTERISTICS	Limits	Units
Minimum Control Current (see figure 1)	5.0	mA
Maximum Control Current for Off-State Leakage @TA =+25°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	Limits	Units
Transient Overvoltage Protection	600	$V_{(DC\ or\ AC\ peak)}$
Operating Voltage	0-280 0-400	V(AC) RMS V(DC)
Maximum Load Current @ T_A = +40°C 5mA Control (see figure 1 and Note 1)	1.0 1.0	A(DC) A (AC) RMS
Maximum Surge Current non-repetitive, 1 sec. non-repetitive 20 msec. (see figure 2)	 5 20	 A(DC) A(DC)
Maximum On-State Voltage Drop @TA =+25°C For 1A pulsed load, 5mA Control (see figures 3 and 4)	2.5	V
Maximum Off-State Leakage @TA =+25°C, ± 400V (see figure 5)	10	µA
Maximum Turn-On Time @TA =+25°C (see figure 8) For 1A, 400 V_{DC} load, 5mA Control	7	ms
Maximum Turn-Off Time @TA =+25°C (see figure 8) For 1A, 400 V_{DC} load, 5mA Control	1	ms
Maximum Output Capacitance @ 100V_{DC} (see figure 7)	50	pF

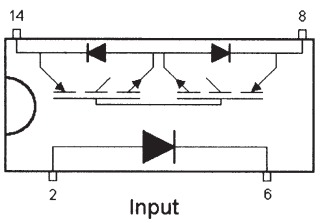
Notes: Load handling capability to 0.2 power factor requires overvoltage tection.

GENERAL CHARACTERISTICS		Limits	Units
Minimum Dielectric Strength, Input-Output		3750	V_{RMS}
Minimum Insulation Resistance, Input-Output @TA =+25°C, 50%RH, 100V_{DC}		10^{12}	Ω
Maximum Capacitance, Input-Output		1.0	pF
Maximum Pin Soldering Temperature (10 seconds maximum)		+260	°C
Ambient Temperature Range:	Operating	-40 to +85	
	Storage	-40 to +100	

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.

Connection Diagram

Output AC or DC Load



Input

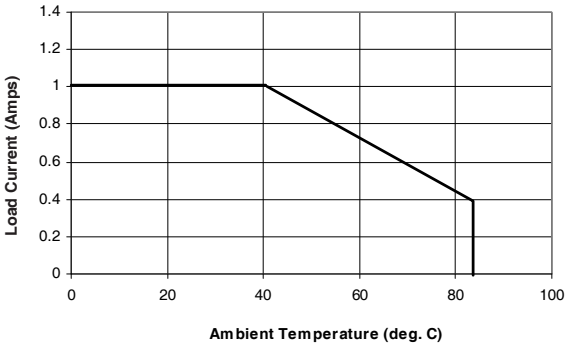


Figure 1. Current Derating Curve

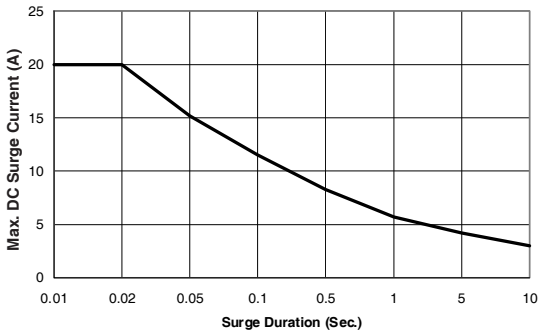


Figure 2. Surge Current Capability

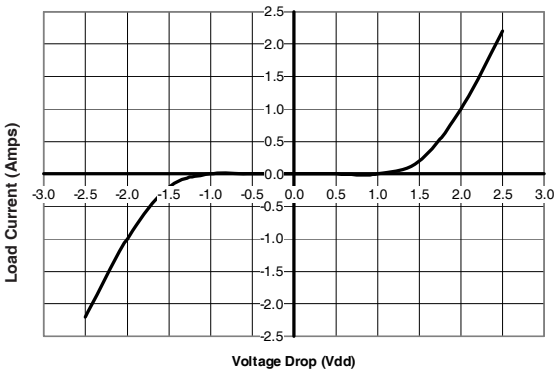


Figure 3. Ouput Characteristics

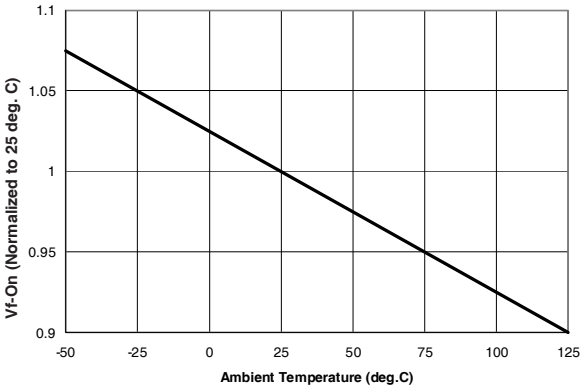


Figure 4. Typical Normalized $V_{CE}ON$

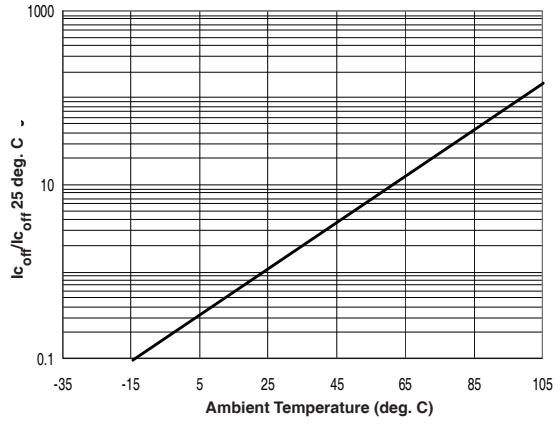


Figure 5. Typical Normalized Off-State Leakage

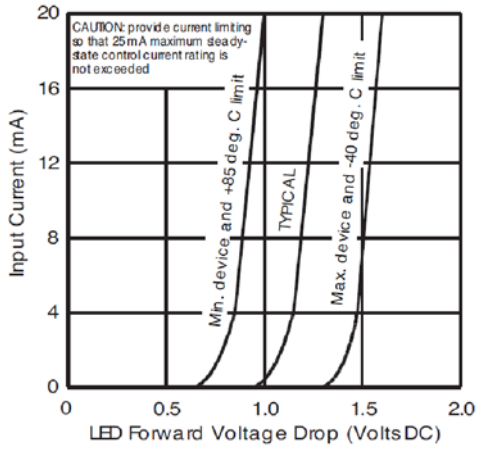


Figure 6. Input Characteristics (Current Controlled)

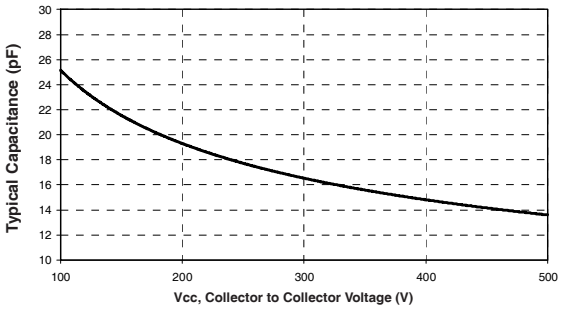


Figure 7. Typical Output Capacitance

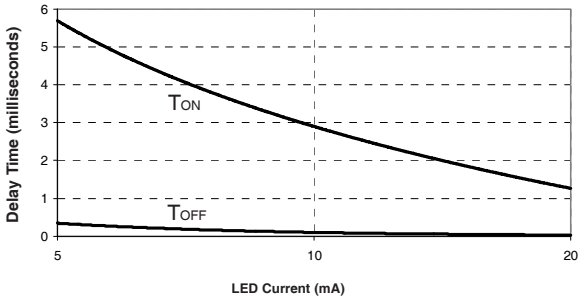


Figure 8. Typical Delay Times

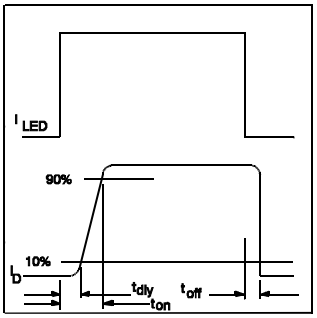
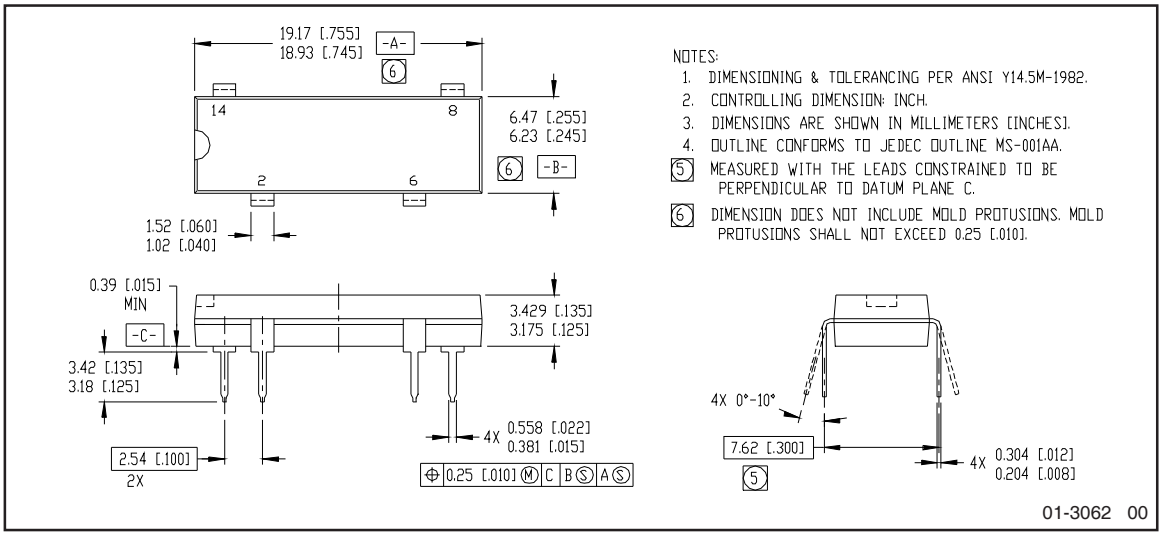


Figure 9. Delay Time Definitions

Case Outline



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	PVX6012PbF	N/A
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
6/9/2015	• Added Qualification Information table on page 5. • Updated data sheet based on corporate template.
6/5/2019	• Updated Feature List on Page 1. • Updated Application List on Page 1.

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