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

| INPUT CHARACTERISTICS | Limits | Units |
|---|---|---|
| Minimum Control Current (see figure 1) | 3.0 | mA |
| Maximum Control Current for Off-State Resistance @$T_A$=+25°C | 0.4 | mA |
| Control Current Range (Caution: current limit input LED, see figure 6) | 3.0 to 25 | mA |
| Maximum Reverse Voltage | 6.0 | V |

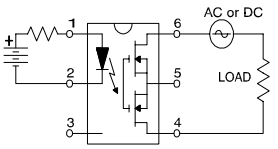
| OUTPUT CHARACTERISTICS | Limits | Units |
|---|---|---|
| Operating Voltage Range | 0 to ±400 | V(DC or AC peak) |
| Maximum Load Current @$T_A$=+40°C, 5mA Control (See figure 1) | | |
| A Connection | 140 | mA (AC or DC) |
| B Connection | 150 | mA (DC) |
| C Connection | 210 | mA (DC) |
| Maximum On-State Resistance @$T_A$=+25°C For 50mA pulsed load, 5mA Control (see figure 4) | | |
| A Connection | 27 | Ω |
| B Connection | 14 | Ω |
| C Connection | 7 | Ω |
| Minimum Off-State Resistance @$T_A$=+25°C, ±320V (see figure 5) | $10^{10}$ | Ω |
| Maximum Turn-On Time @$T_A$=+25°C (see figure 7) For 50mA, 100 $V_{DC}$ Load, 5mA Control | 500 | µs |
| Maximum Turn-Off Time @$T_A$=+25°C (see figure 7) For 50mA, 100 $V_{DC}$ Load, 5m$_A$ Control | 200 | µs |
| Maximum Thermal Offset Voltage @ 5mA Control | 0.2 | µV |
| Maximum Output Capacitance @ 50$V_{DC}$ (see figure 2) | 12 | pF |

| GENERAL CHARACTERISTICS | | Limits | Units |
|---|---|---|---|
| Minimum Dielectric Strength, Input-Output | | 4000 | $V_{RMS}$ |
| Minimum Insulation Resistance, Input-Output @$T_A$=+25°C, 50%RH, 100$V_{DC}$ | | $10^{12}$ | Ω |
| Maximum Capacitance, Input-Output | | 1.0 | pF |
| Maximum Pin Soldering Temperature (10 seconds maximum) | | +260 | ℃ |
| Ambient Temperature Range: | Operating | -40 to +85 | ℃ |
| | Storage | -40 to +100 | |

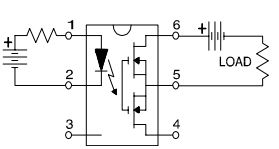
International Rectifier does not recommend the use of this product in aerospace, avionics, military or life support applications. Users of this International Rectifier product in such applications assume all risks of such use and indemnify International Rectifier against all damages resulting from such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

## Connection Diagrams

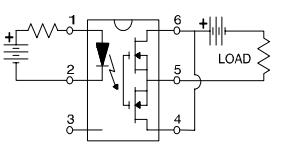
"A" Connection




"B" Connection




"C" Connection



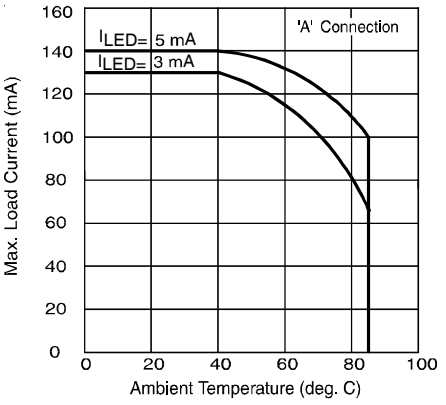




**Figure 1. Current Derating Curves**

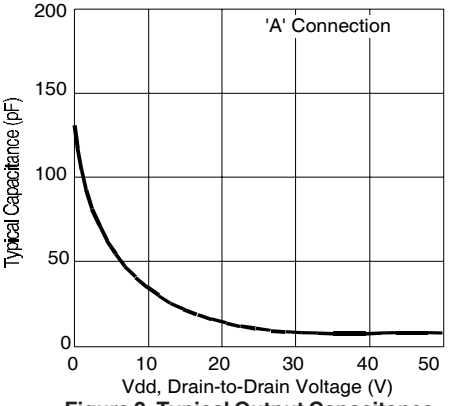



**Figure 2. Typical Output Capacitance**

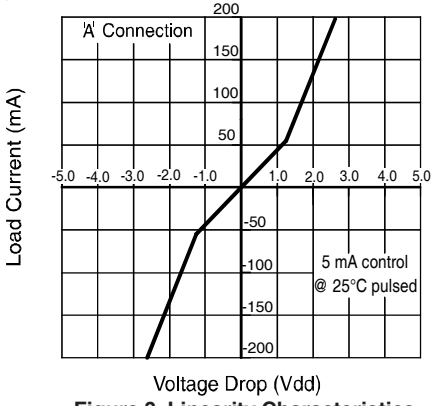



**Figure 3. Linearity Characteristics**

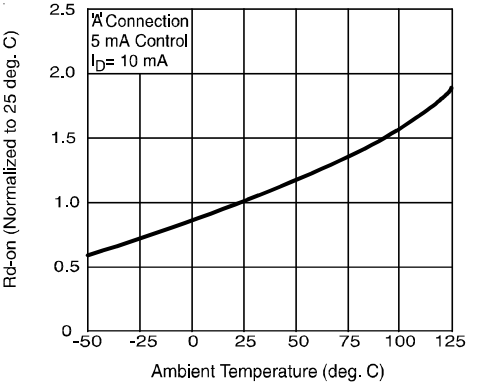



**Figure 4. Typical Normalized On-Resistance**

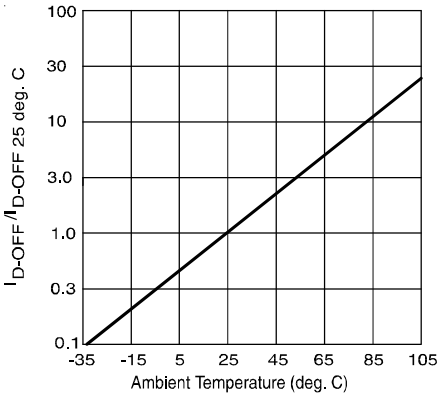



**Figure 5. Typical Normalized Off-State Leakage**

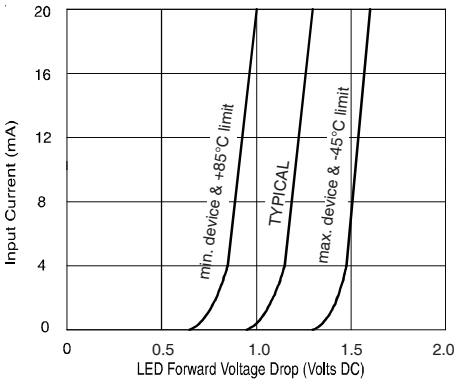



**Figure 6. Input Characteristics (Current Controlled)**

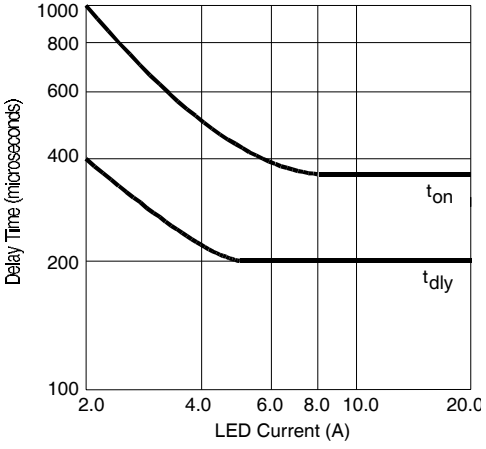



**Figure 7. Typical Delay Times**

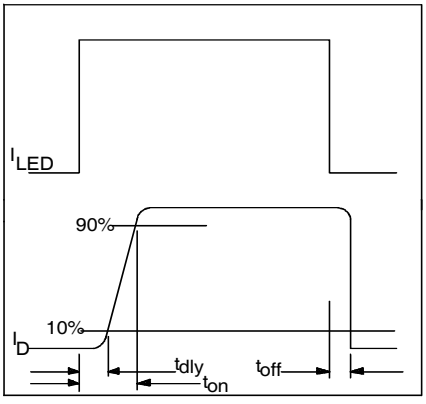
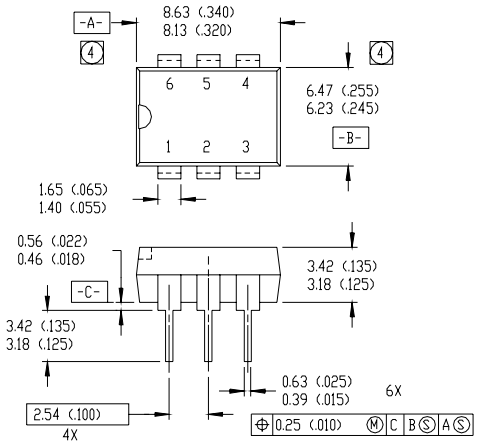
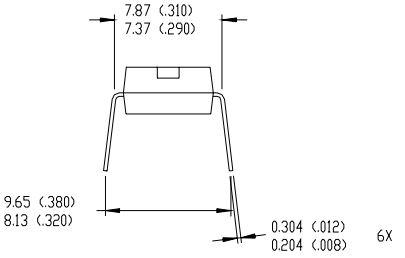



**Figure 8. Delay Time Definitions**

## 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 PROTUSIONS. MOLD PROTUSIONS SHALL NOT EXCEED 0.25 (.010).

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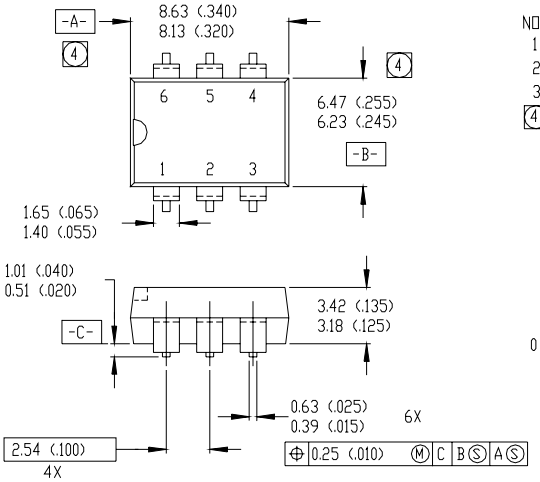


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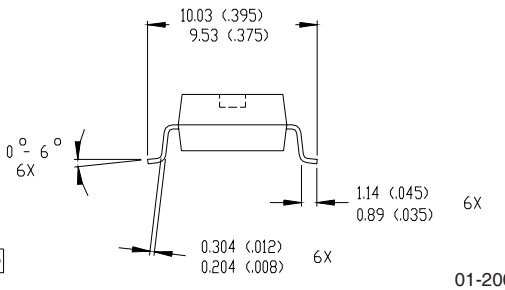


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**Note: For the most current drawing please refer to IR website at:** http://www.irf.com/package/

## Qualification information†

| | | |
|---|---|---|
| Qualification level | Industrial (per JEDEC JESD47I †† guidelines) | |
| Moisture Sensitivity Level | PVU414PbF | N/A |
| | PVU414SPbF | MSL4 (per JEDEC J-STD-020E & JEDEC J-STD-033C ††) |
| | PVU414S-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 | Comments |
|---|---|
| 6/2/2015 | • Added Qualification Information Table on page 6<br>• Updated data sheet with new IR corporate template |

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