# International TOR Rectifier

#### **Electrical Specifications** (-40°C $\leq$ T<sub>A</sub> $\leq$ +85°C unless otherwise specified)

INPUT CHARACTERISTICS	Limits	Units
Minimum Control Current (see figure 1)	5.0	mA
Maximum Control Current for Off-State Resistance @ T <sub>A</sub> = +25°C	0.4	mA
Control Current Range (Caution: current limit input LED, see figure 6)	5.0 - 25	mA
Maximum Reverse Voltage (1mA max.)	6.0	V

OUTPUT CHARACTERISTICS		Limits	Units	
Operating Voltage Range		0 to ±60	V(DC or AC peak)	
Maximum Continuous Load Current @ T <sub>A</sub> = +40°C, 10mA Control				
(see figure 1)	A Connection	2.0	A (AC or DC)	
	B Connection	2.5	A (DC)	
	C Connection	4.0	A (DC)	
Maximum Pulsed Load Current @ T <sub>A =+25°</sub> C (100 ms @ 10% Duty Cycle)				
	A Connection	7.5	A (AC or DC)	
	B Connection	8.5	A (DC)	
	C Connection	15.5	A (DC)	
Typical Thermal Resistance (Rthja, Junction-to-Ambient)				
	A Connection	79.1	(°C/W)	
	B Connection	112.2	(°C/W)	
	C Connection	81.0	(°C/W)	
Maximum On-State Resistance @TA =+25°C				
For 1A pulsed load, 10mA Control (see figure 4)	A Connection	100	mΩ	
	B Connection	50	mΩ	
	C Connection	35	mΩ	
Maximum Off-State Leakage @ 60V, TA =+25°C		1.0	μΑ	
Maximum Turn-On Time @TA =+25°C (see figures For 500mA, 50V <sub>DC</sub> load, 10mA Control, 10mS pt		3.5	ms	
Maximum Turn-Off Time @TA =+25°C (see figure	es 7 & 8)			
For 500mA, 50V <sub>DC</sub> load, 10mA Control, 10mS pu		0.5	ms	
Typical Output Capacitance @ Vdd=50V, f=1MHz (see figure 2)		105	pF	

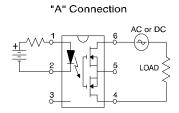
GENERAL CHARACTERISTICS		Limits	Units
Minimum Dielectric Strength, Input-Output		4000	$V_{RMS}$
Minimum Insulation Resistance, Input-Output,	@T <sub>A</sub> =+25°C, 50%RH, 100V <sub>DC</sub>	10 <sup>12</sup>	Ω
Maximum Capacitance, Input-Output		1.0	pF
Maximum Pin Soldering Temperature (10 seconds maximum)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

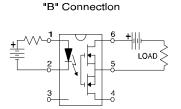
International Rectifier does not recommend the use of this product in aerospace, avionics, military or life support applications. Users of this International Rectifier product in such applications assume all risks of such use and indemnify International Rectifier against all damages resulting from such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

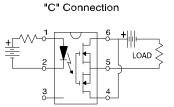
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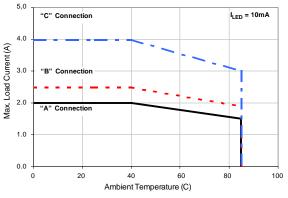
#### Series PVG612A & PbF

#### **Connection Diagrams**









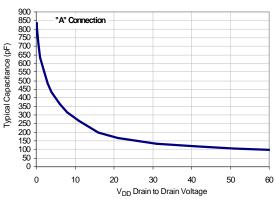
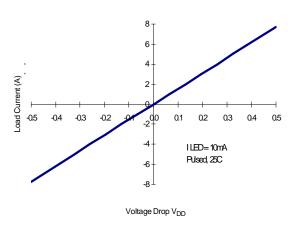


Figure 1. Current Derating Curves

Figure 2. Typical Output Capacitance



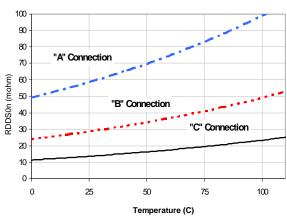
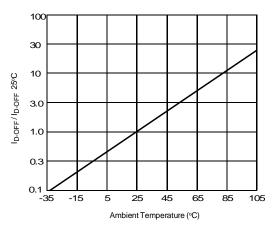


Figure 3. Typical Linearity Characteristics

Figure 4. Typical Normalized On-Resistance

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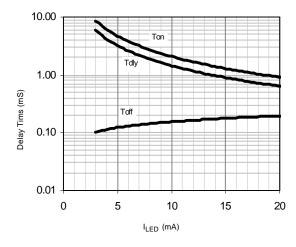
20 CAUTION: provide current limiting so that 25 mA maximum steady-state control current rating is not exceeded

16 12 0 0 0 0.5 1.0 1.5 2.0

LED Forward Voltage Drop (Volts DC)

Figure 5. Typical Normalized Off-State Leakage

Figure 6. Input Characteristics (Current Controlled)



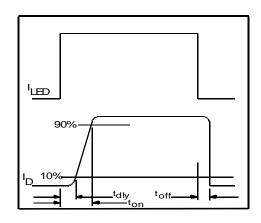
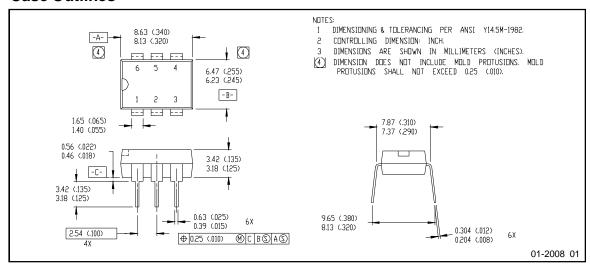


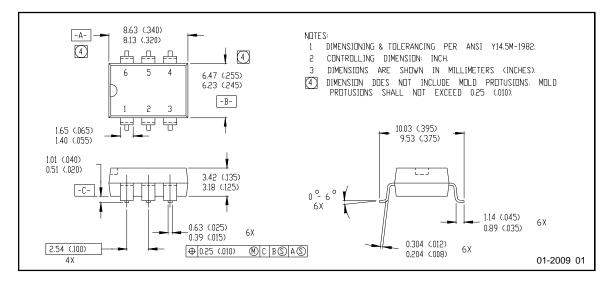
Figure 7. Typical Delay Times

Figure 8. Delay Time Definitions

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#### **Case Outlines**





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This product has been designed and qualified for the Industrial market.

Data and specifications subject to change without notice. 2/2008

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