

**Product Summary @ $T_A = +25^{\circ}\text{C}$** 

$V_{RRM}$ (V)	$I_O$ (A)	$V_{FMAX}$ (V)	$I_{RMAX}$ ( $\mu\text{A}$ )
30, 40, 60	8	0.7	100

**Description and Applications**

8.0 A Schottky Barrier Rectifier in DO-201AD package, offers high current capability and low forward voltage drop, designed with Guard Ring for Transient Protection and high surge capacity.

**Features and Benefits**

- High Current Capability and Low Forward Voltage Drop
- High Surge Capacity
- Guard Ring for Transient Protection
- Low Power Loss, High Efficiency
- **Lead Free Finish, RoHS Compliant (Note 1 & 2)**

**Mechanical Data**

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode band
- Mounting Position: Any
- Weight: 1.1 grams (approximate)

**Maximum Ratings (@ $T_A = +25^{\circ}\text{C}$ , unless otherwise specified.)**

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

Characteristic	Symbol	SD830	SD840	SD860	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	40	60	V
Working Peak Reverse Voltage	$V_{RWM}$				
DC Blocking Voltage	$V_{RM}$				
RMS Reverse Voltage	$V_{R(RMS)}$	21	28	42	V
Average Rectified Output Current (See Figure 1)	$I_O$	8			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	175			A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Lead (Note 3) $T_A = +25^{\circ}\text{C}$	$R_{\theta JL}$	30	$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^{\circ}\text{C}$

**Electrical Characteristics (@ $T_A = +25^{\circ}\text{C}$ , unless otherwise specified.)**

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	$V_F$	–	0.55	0.7	V	$I_F = 8\text{A}, T_J = +25^{\circ}\text{C}$
Leakage Current	$I_R$	–	–	1.0	mA	$V_R = V_{RRM}, T_J = +25^{\circ}\text{C}$
				50		$V_R = V_{RRM}, T_J = +100^{\circ}\text{C}$
Typical Junction Capacitance (Note 4)	$C_J$	–	550	–	pF	$V_R = 4\text{V}, f = 1.0\text{MHz}$

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
  2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Thermal resistance from junction to lead vertical PC board mounting, 9.5mm lead length.
  4. Measured at 1.0MHz and applied reverse voltage of 4.0V.

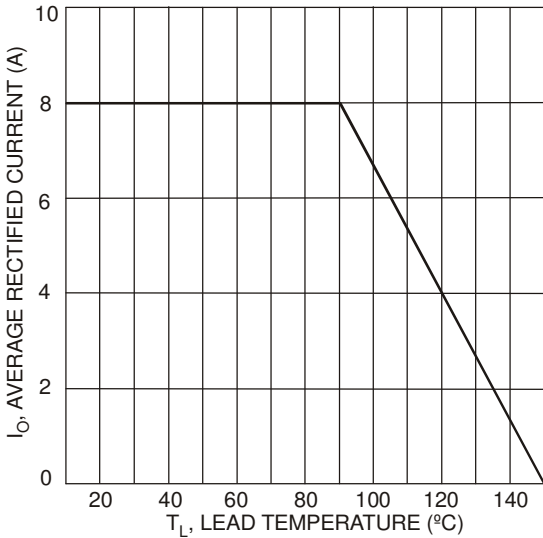


Fig. 1 Forward Current Derating Curve

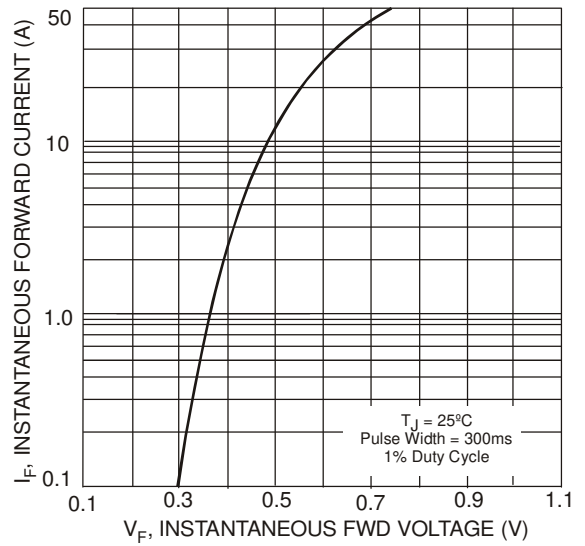


Fig. 2 Typical Forward Characteristics

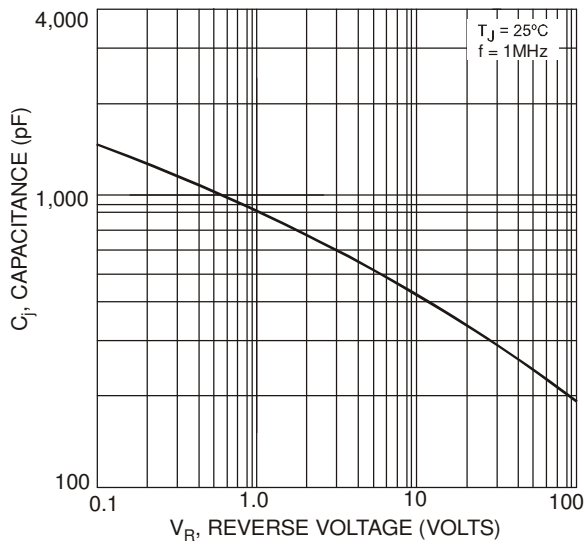


Fig. 3 Typical Junction Capacitance

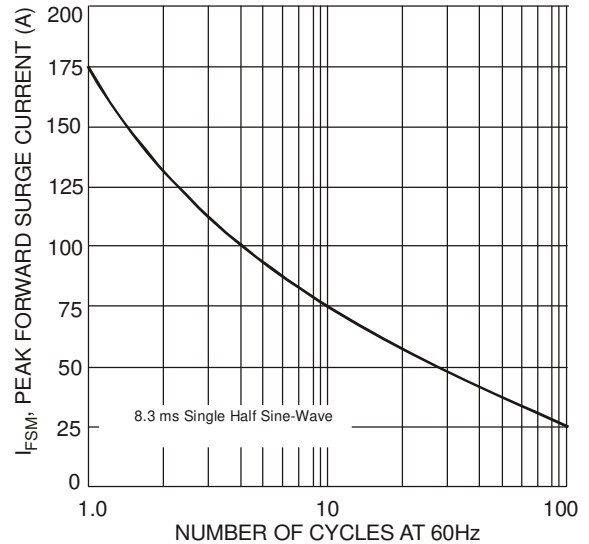
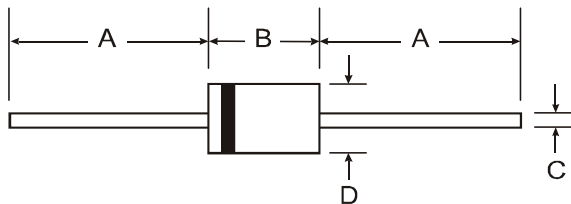


Fig. 4 Max Non-Repetitive Peak Fwd Surge Current

## Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



DO-201AD		
Dim	Min	Max
A	25.40	-
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

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