THE DATASHEET OF

SD830-T

www.win-source.net 0086-755-83957316

8.0A SCHOTTKY BARRIER RECTIFIERS

Product Summary @T_A = +25°C

V_{RRM} (V)	I_O (A)	V_{FMAX} (V)	I_{RMAX} (μA)
30, 40, 60	8	0.7	100

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)**

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.

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 e3
- Polarity: Cathode band
- Mounting Position: Any
- Weight: 1.1 grams (approximate)

Maximum Ratings (@T_A = +25°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 Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	30	40	60	V
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°C	$R_{\theta JL}$	30	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

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

Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exempltions applied.
2. See 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.

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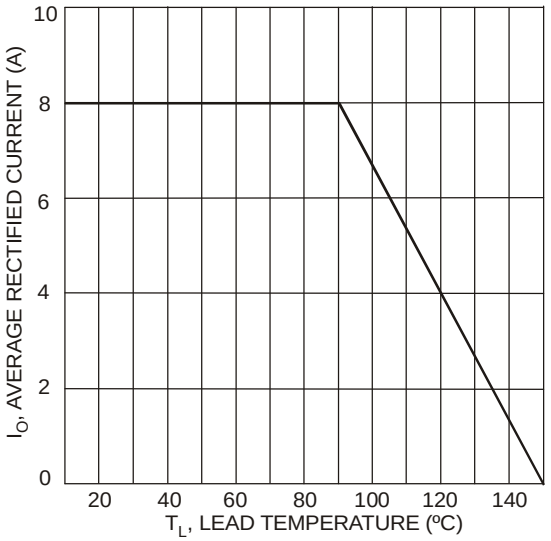


Fig. 1 Forward Current Derating Curve

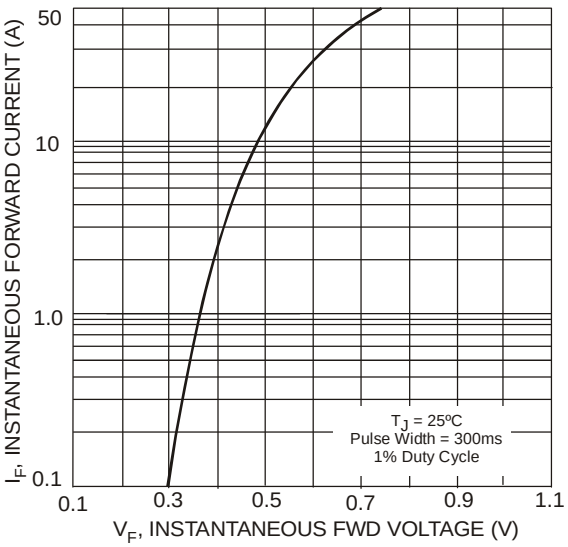


Fig. 2 Typical Forward Characteristics

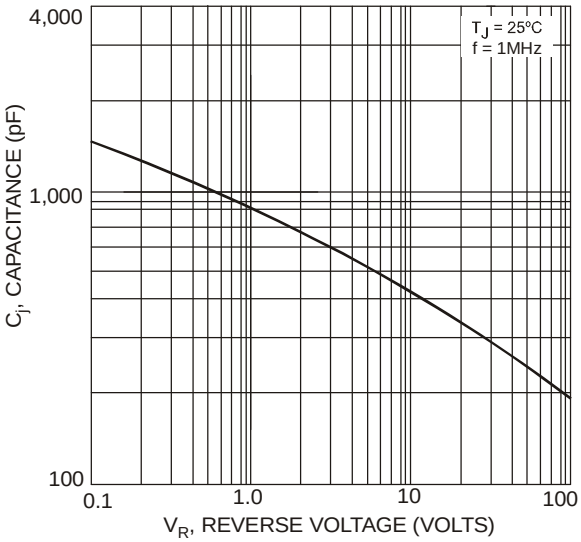


Fig. 3 Typical Junction Capacitance

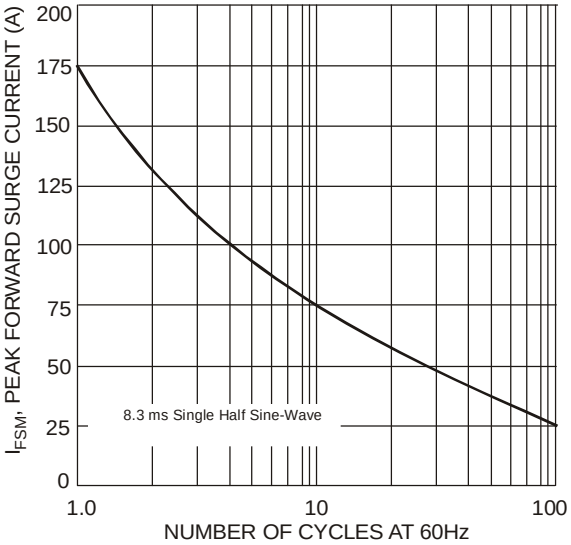
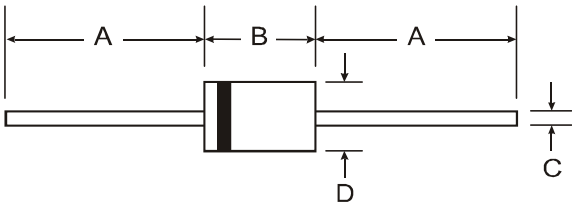


Fig. 4 Max Non-Repetitive Peak Fwd Surge Current

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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