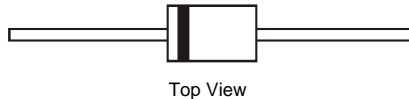


Features

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

Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish — Tin. Leads Solderable per MIL-STD-202, Method 208 **(E3)**
- Polarity: Cathode Band
- Mounting Position: Any
- Ordering Information: See Page 3
- 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	SD930	SD940	SD945	Unit
Peak Repetitive Reverse Voltage	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}	30	40	45	V
DC Blocking Voltage	V_R				
Voltage Rate of Change	dv/dt	10,000			V/ μs
Maximum Average Forward Current (Note 3)	I_O	9.0			A
Maximum Peak One-Cycle Surge Current	I_{FSM}	2150 340			A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 2)	$R_{\theta JL}$	8.0	K/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 (Note 4)	V_F	-	-	0.48	V	$I_F = 9.0\text{A}, T_J = 25^\circ\text{C}$
		-	-	0.42		$I_F = 9.0\text{A}, T_J = 125^\circ\text{C}$
		-	-	0.57		$I_F = 18\text{A}, T_J = 25^\circ\text{C}$
		-	-	0.52		$I_F = 18\text{A}, T_J = 125^\circ\text{C}$
Peak Reverse Current (Note 4)	I_R	-	-	0.8 70	mA	@ Rated $V_R, T_A = 25^\circ\text{C}$ @ Rated $V_R, T_A = 100^\circ\text{C}$
Total Capacitance	C_T	-	-	900	pF	$V_R = 4\text{V}, f = 1\text{MHz}$

- Notes:
1. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see *EU Directive Annex Notes 5 and 7*.
 2. Thermal resistance from junction to lead vertical PC board mounting, 9.5mm lead length.
 3. Device mounted to heat sink with 1/8" lead length.
 4. Pulse width $\leq \mu\text{s}$ - Duty Cycle $\leq 2\%$.
 5. Short duration pulse test used to minimize self-heating effect.

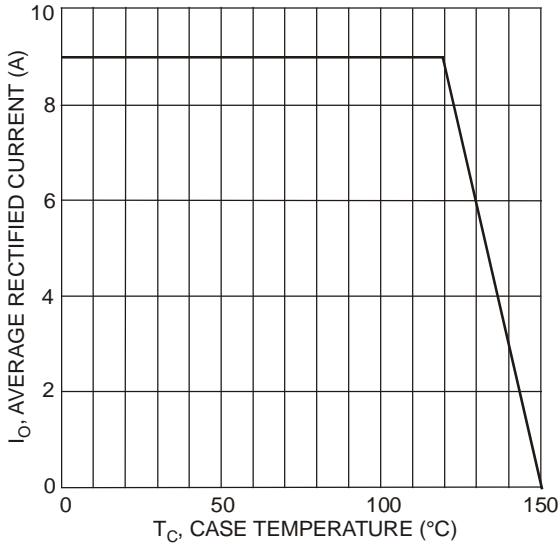


Fig. 1 Forward Current Derating Curve

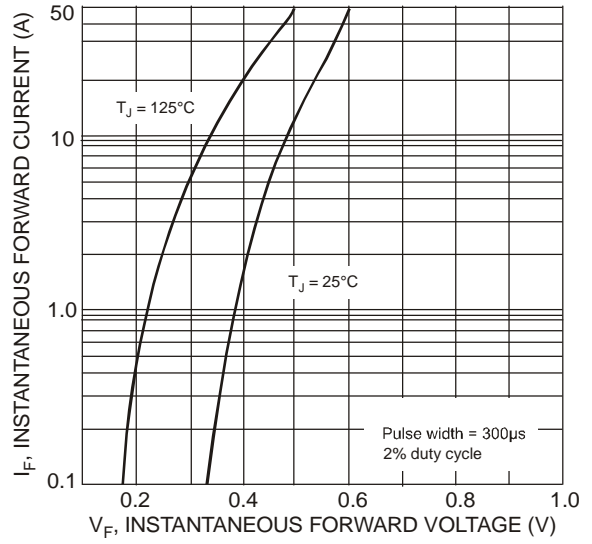


Fig. 2 Typical Forward Characteristics

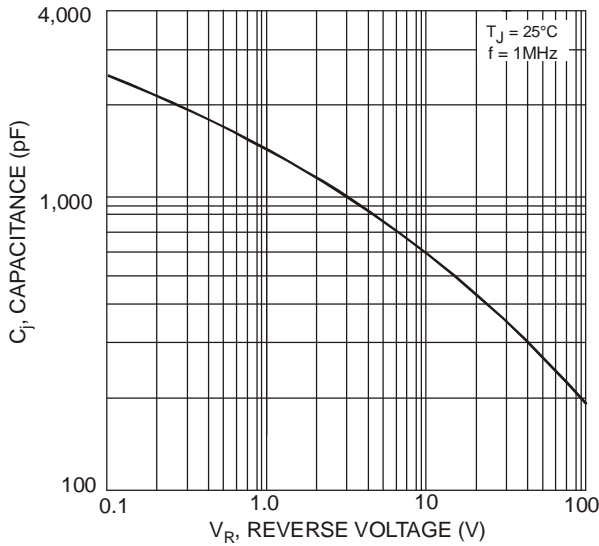


Fig. 3 Maximum Junction Capacitance

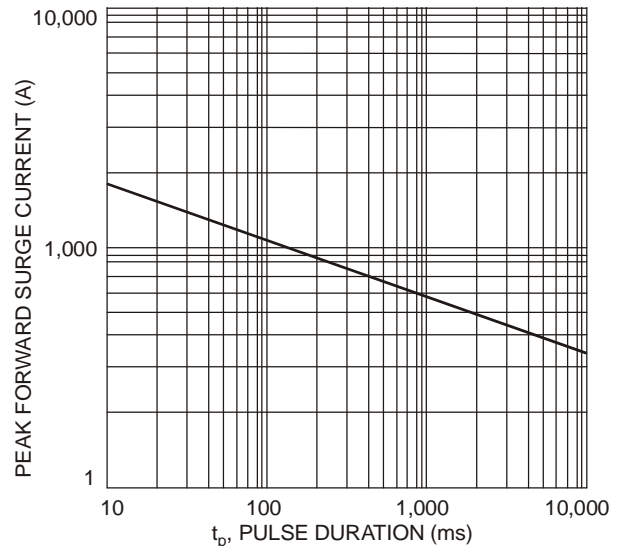


Fig. 4 Maximum Non-repetitive Surge Current

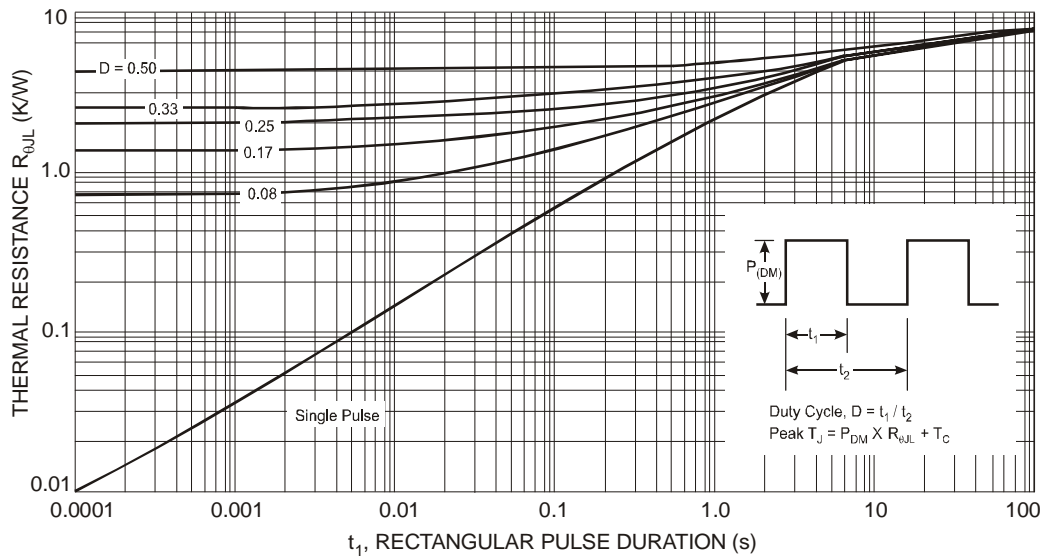
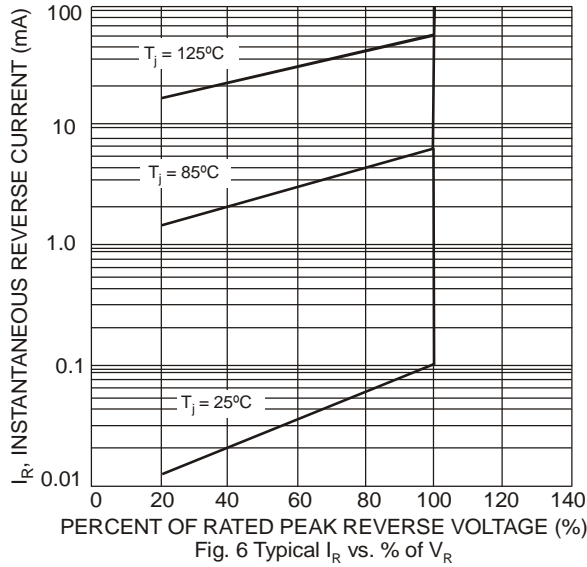


Fig. 5 Typical Thermal Resistance $R_{\theta JL}$

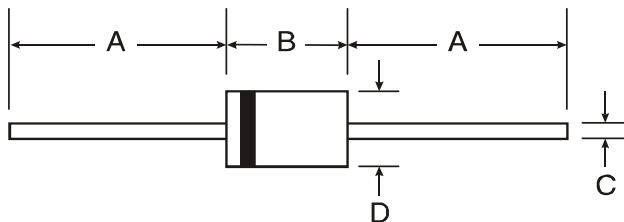


Ordering Information (Note 6)

Part Number	Case	Packaging
SD930-B	DO-201AD	500/Bulk
SD930-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SD940-B	DO-201AD	500/Bulk
SD940-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SD945-B	DO-201AD	500/Bulk
SD945-T	DO-201AD	1.2K/Tape & Reel, 13-inch

Notes: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Package Outline Dimensions



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		

IMPORTANT NOTICE



Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View SD930-T on WIN SOURCE](#)
-  [Diodes Incorporated Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management