



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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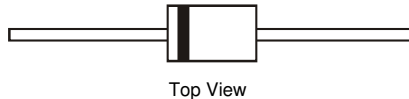


Features

- 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 
- Polarity: Cathode Band
- Mounting Position: Any
- Ordering Information: See Page 3
- 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	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 @ T _C = 120°C (Note 3)	I _O	9.0			A
Maximum Peak One-Cycle Surge Current @ 5μs Sine Wave @ 10ms Sine Wave	I _{FSM}	2150 340			A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 2)	R _{θJL}	8.0	K/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 (Note 4)	V _F	-	-	0.48 0.42 0.57 0.52	V	I _F = 9.0A, T _J = 25°C I _F = 9.0A, T _J = 125°C I _F = 18A, T _J = 25°C I _F = 18A, T _J = 125°C
Peak Reverse Current (Note 4)	I _R	-	-	0.8 70	mA	@ Rated V _R , T _A = 25°C @ Rated V _R , T _A = 100°C
Total Capacitance	C _T	-	-	900	pF	V _R = 4V, f = 1MHz

- 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 ≤ μs - Duty Cycle ≤ 2%.
 5. Short duration pulse test used to minimize self-heating effect.

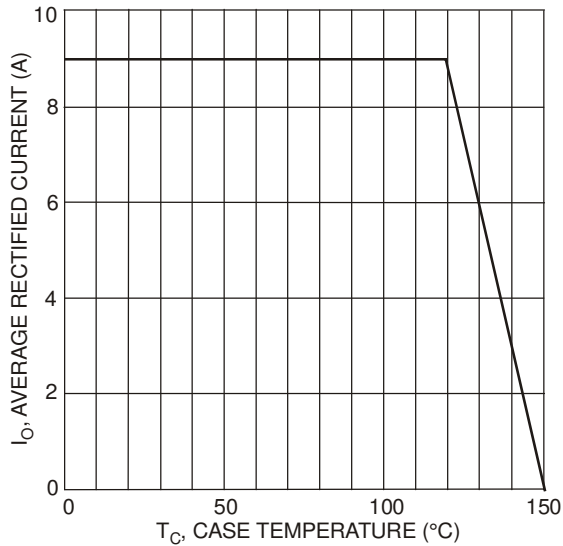


Fig. 1 Forward Current Derating Curve

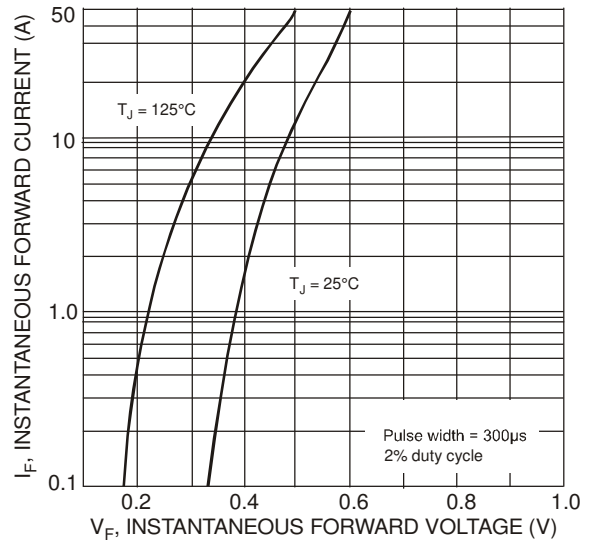


Fig. 2 Typical Forward Characteristics

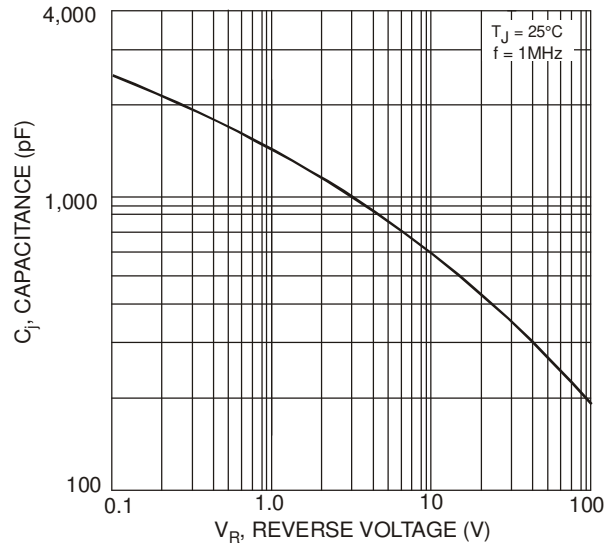


Fig. 3 Maximum Junction Capacitance

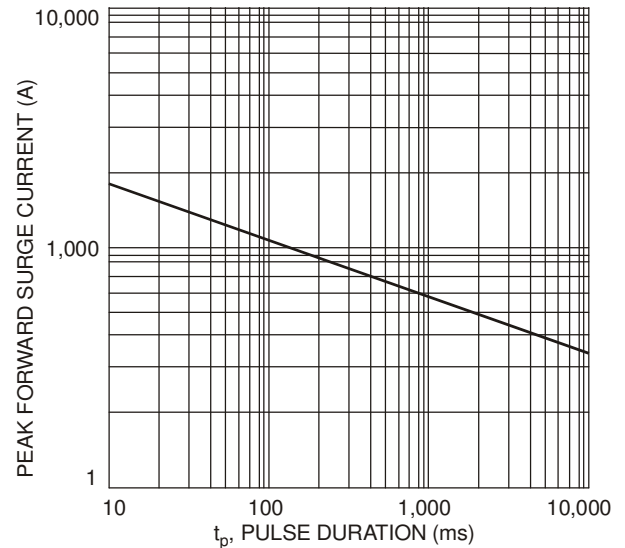


Fig. 4 Maximum Non-repetitive Surge Current

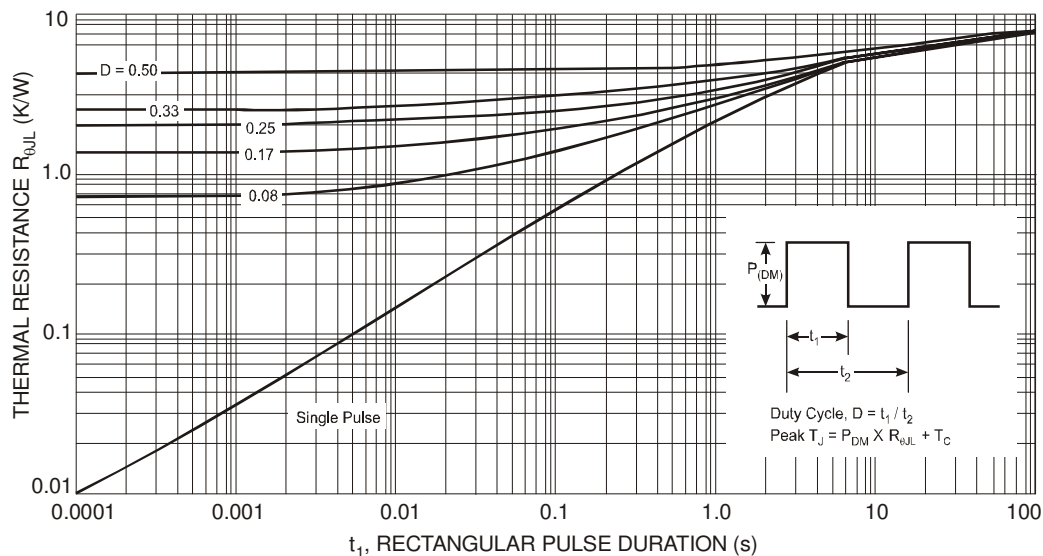
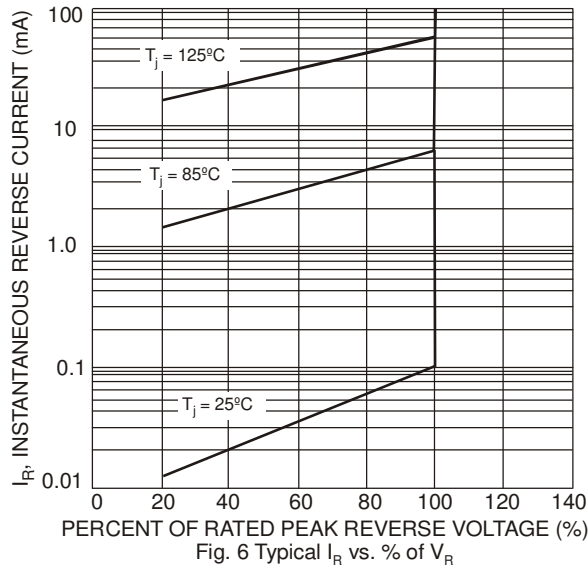


Fig. 5 Typical Thermal Resistance $R_{\theta J L}$

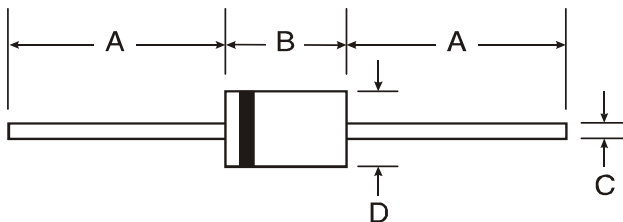


Ordering Information (Note 6)

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		

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