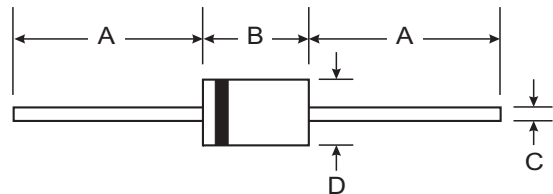


Features

- 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 5)**



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. Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode band
- Mounting Position: Any
- Ordering Information: See Last Page
- Weight: 1.1 grams (approximate)

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		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	SD930	SD940	SD945	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	40	45	V
Maximum Average Forward Current (Note 2) @ T _C = 120°C	I _O	9.0			A
Maximum Peak One-Cycle Surge Current @ 5μs Sine Wave @ 10ms Sine Wave	I _{FSM}	2150 340			A
Forward Voltage (Note 1) @ 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	V _{FM}	0.48 0.42 0.57 0.52			V
Voltage Rate of Change	dv/dt	10,000			V/μs
Peak Reverse Current at Rated DC Blocking Voltage (Note 1) @ T _J = 25°C @ T _J = 125°C	I _{RM}	0.8 70			mA
Maximum Junction Capacitance (Note 2)	C _j	900			pF
Typical Thermal Resistance Junction to Case (Note 4)	R _{θJL}	8.0			K/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150			°C

- Notes:
1. Pulse width ≤ μs - Duty Cycle ≤ 2%.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V.
 3. Device mounted to heat sink with 1/8" lead length.
 4. Thermal Resistance from Junction to Lead Vertical PC Board Mounting, 9.5mm Lead Length.
 5. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

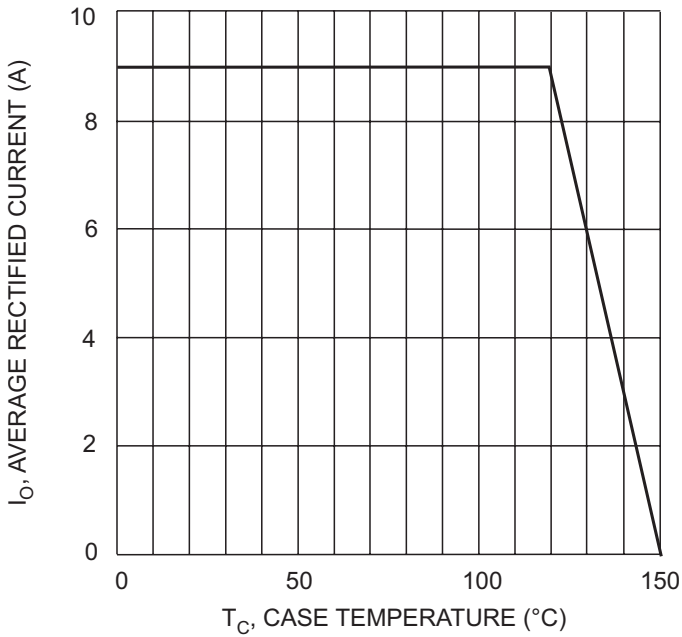


Fig. 1 Fwd Current Derating Curve

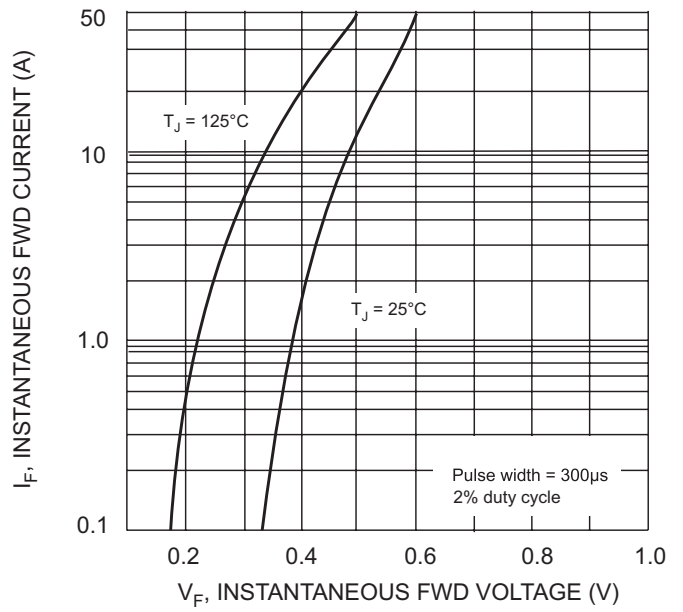


Fig. 2 Typical Forward Characteristics

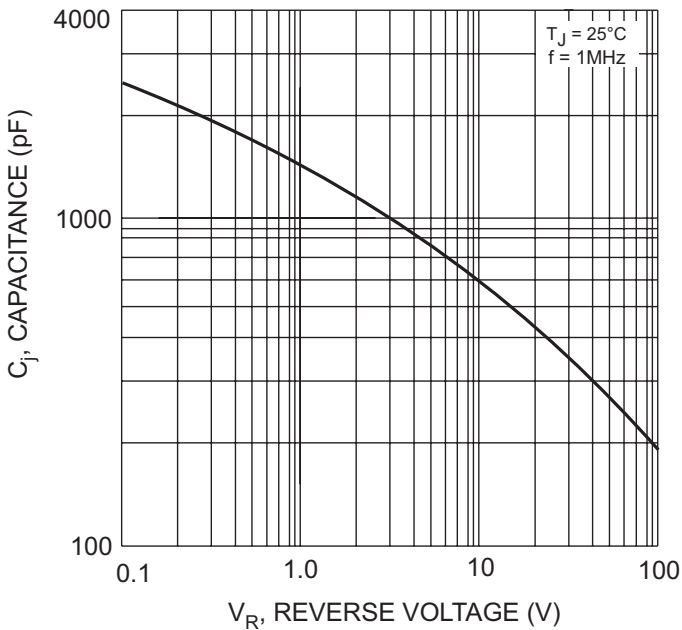


Fig. 3 Maximum Junction Capacitance

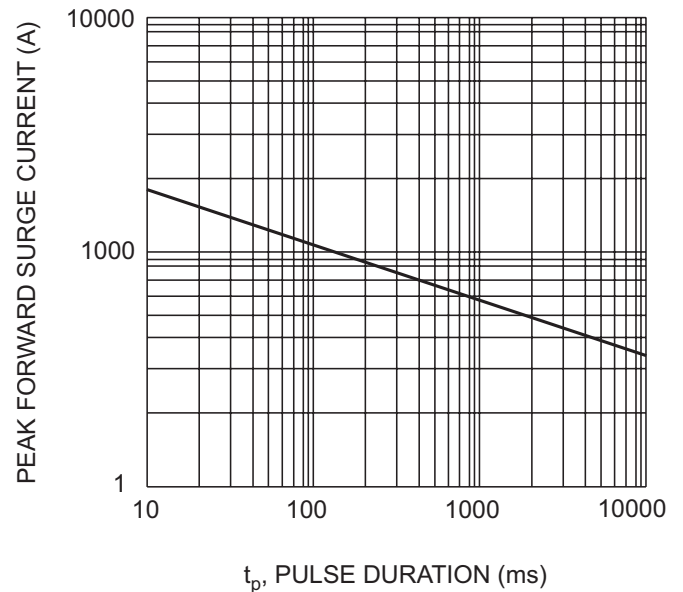
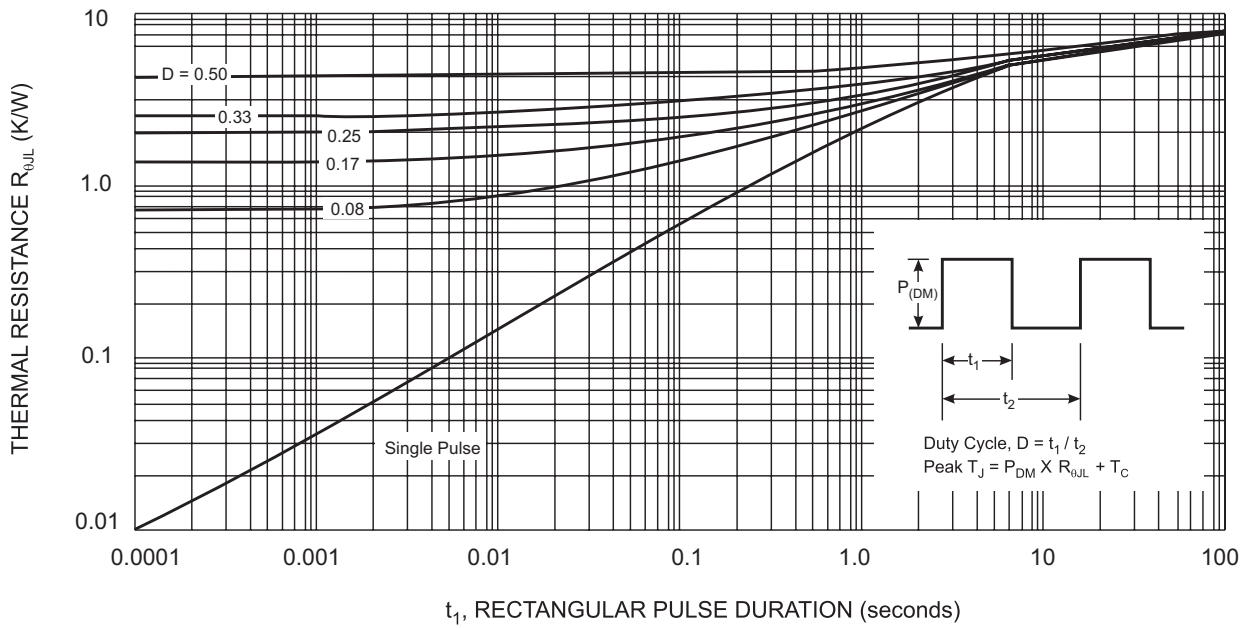
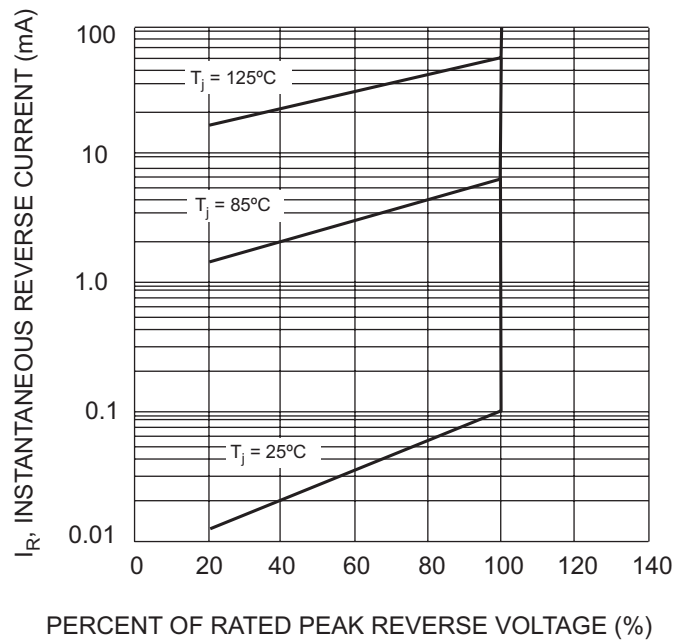


Fig. 4, Maximum Non-repetitive Surge Current



t_1 , RECTANGULAR PULSE DURATION (seconds)

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



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

Fig. 6, Typical I_R vs. % of V_R

Ordering Information (Note 6)

Device	Packaging	Shipping
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, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>