

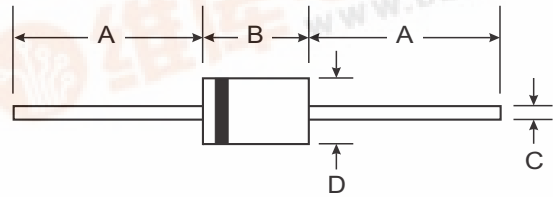


SD930 / SD940 / SD945

HIGH CURRENT SCHOTTKY BARRIER RECTIFIER

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.



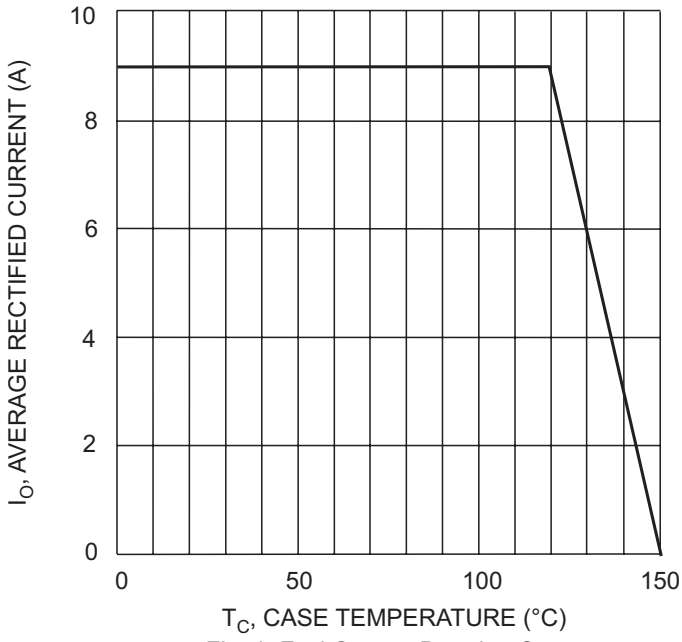


Fig. 1 Fwd Current Derating Curve

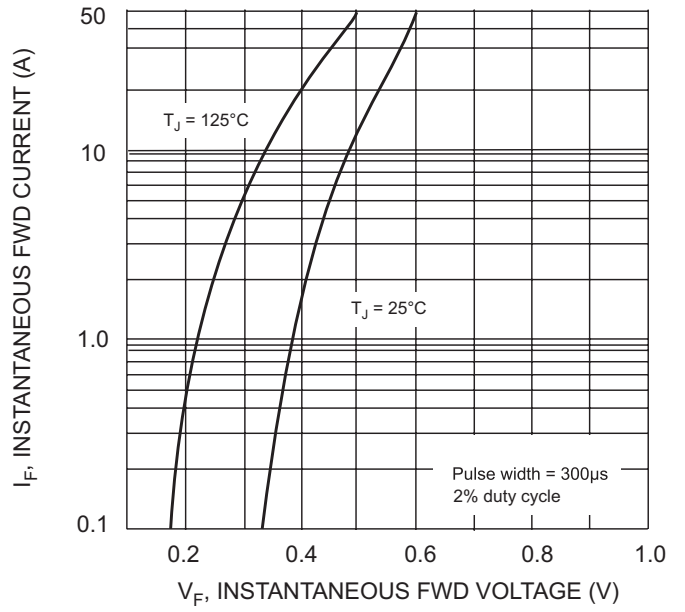


Fig. 2 Typical Forward Characteristics

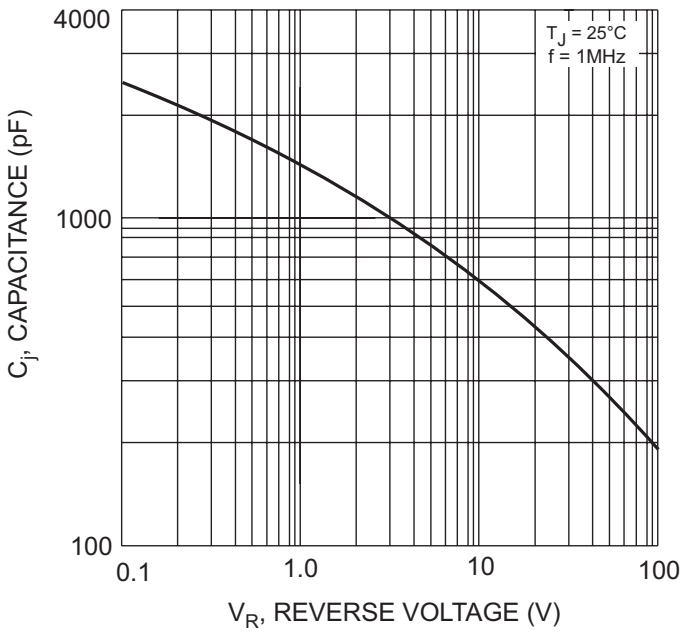


Fig. 3 Maximum Junction Capacitance

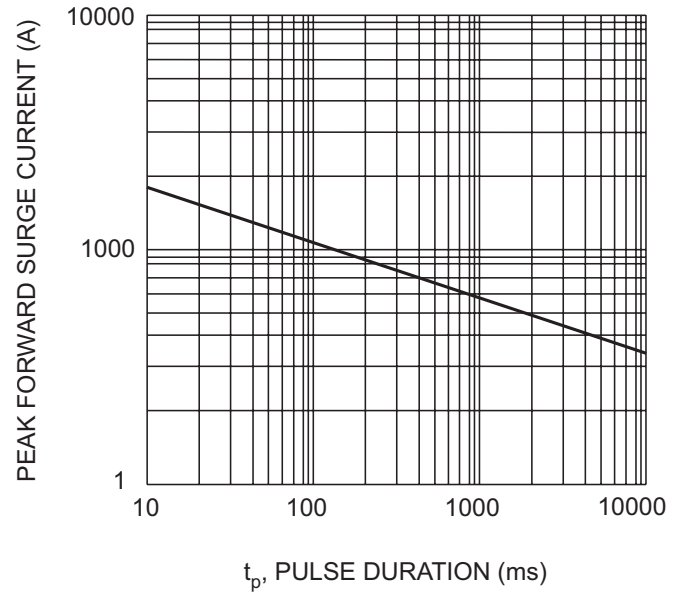
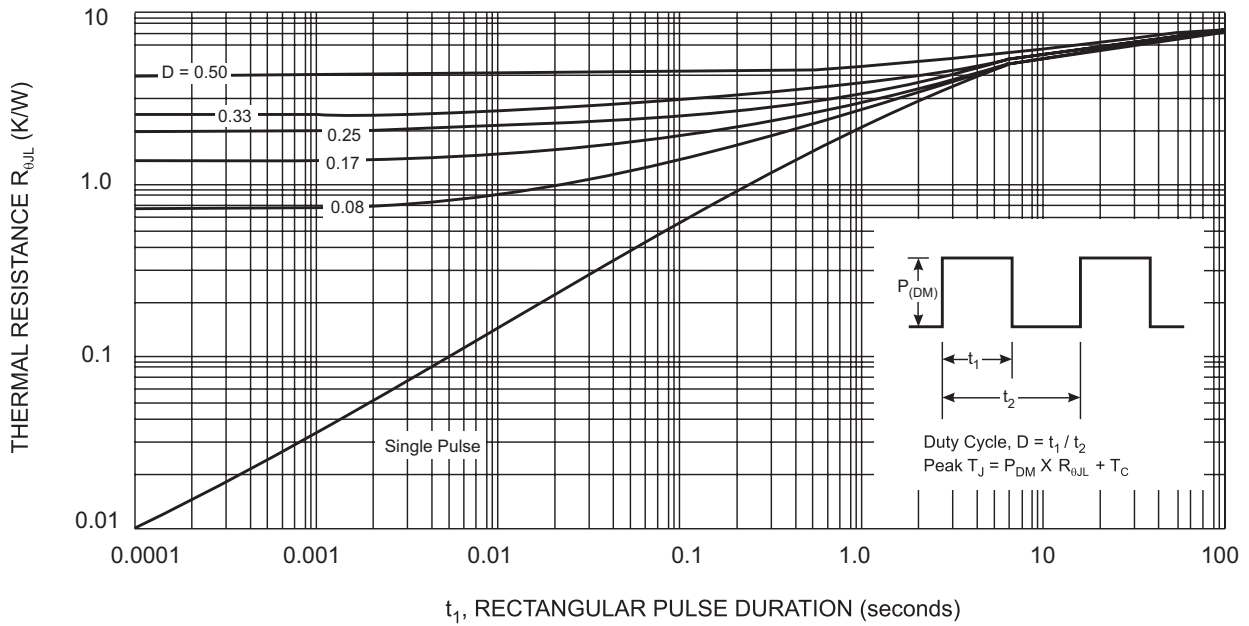


Fig. 4, Maximum Non-repetitive Surge Current



t_1 , RECTANGULAR PULSE DURATION (seconds)
Fig. 5, Typical Thermal Resistance $R_{\theta JL}$

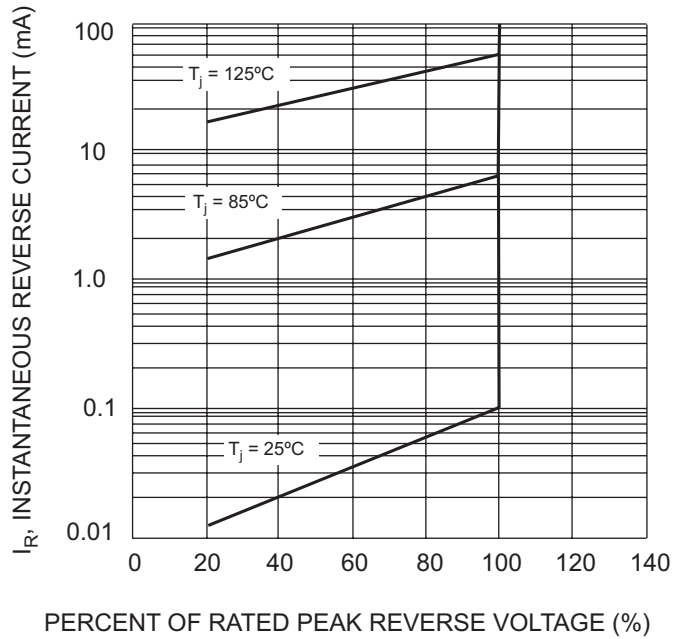


Fig. 6, Typical I_R vs. % of V_R

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>