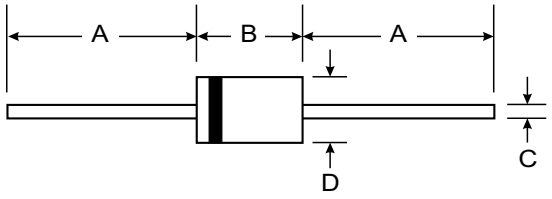
SD930 / SD940 / SD945

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
- Plastic Package - UL Flammability Classification 94V-0



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		

Mechanical Data

- Case: DO-201AD, Molded Plastic
- Leads: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode band
- Approx. Weight: 1.1 grams
- Mounting Position: Any

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 @ T_C = 120°C (Note 2)	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 @T_J = 25°C at Rated DC Blocking Voltage (Note 1) @ 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)	$R_{\theta JL}$	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.

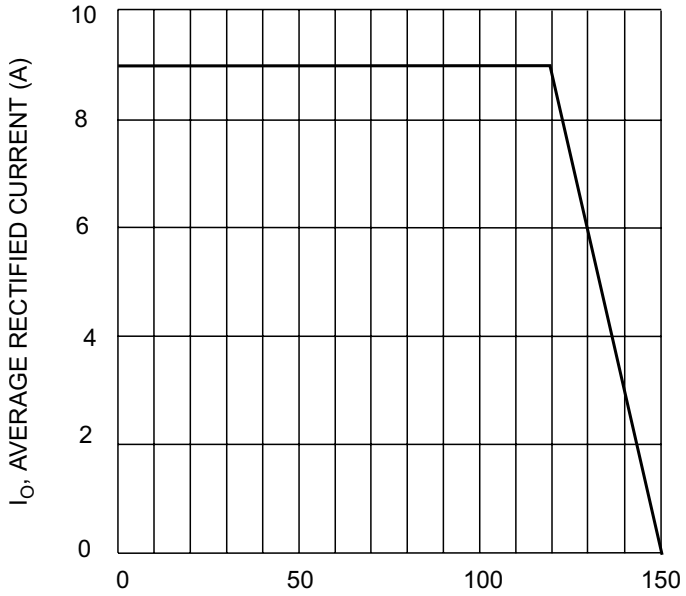


Fig. 1 Fwd Current Derating Curve

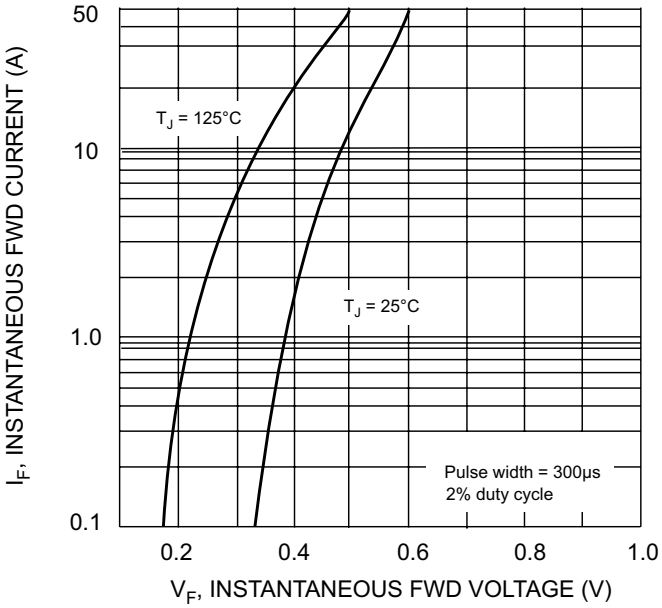


Fig. 2 Typical Forward Characteristics

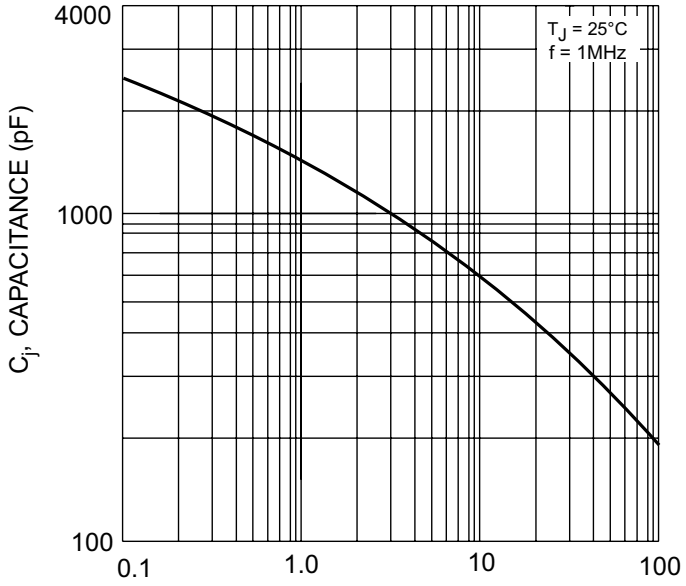


Fig. 3 Maximum Junction Capacitance

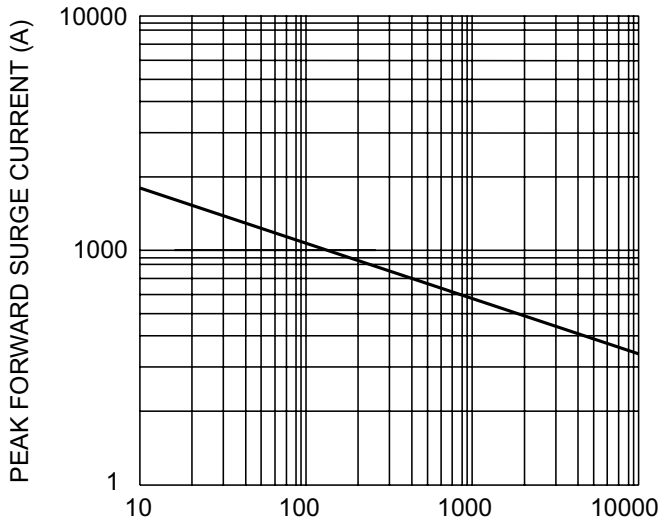


Fig. 4, Maximum Non-repetitive Surge Current

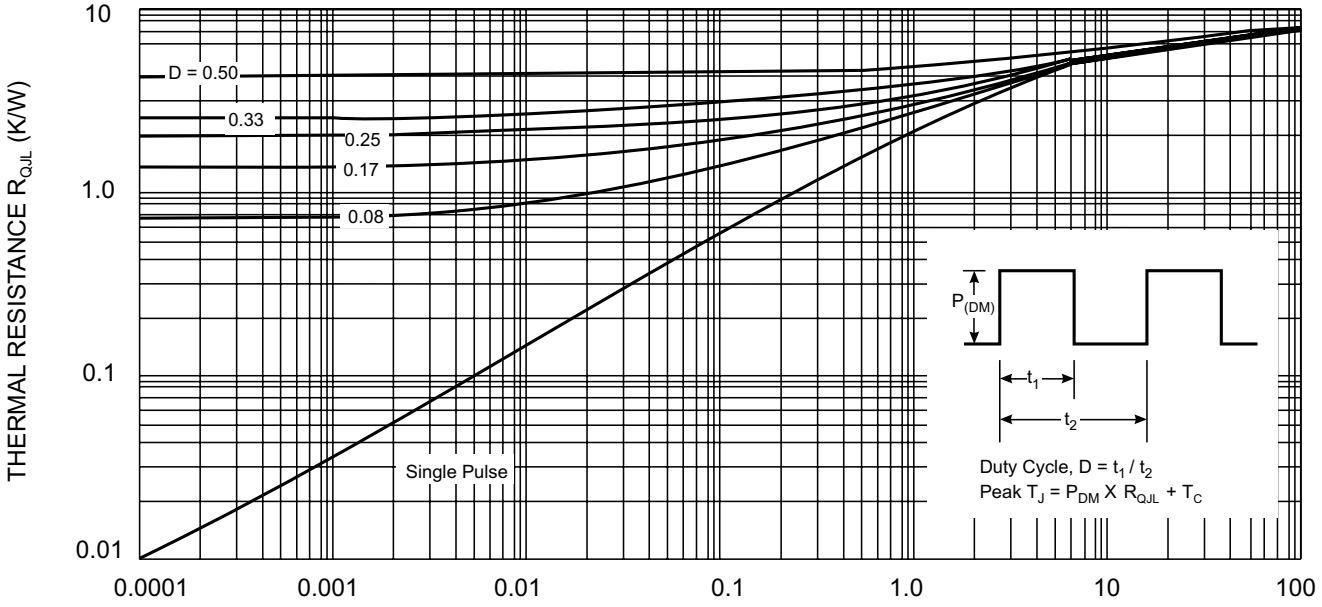


Fig. 5, Typical Thermal Resistance R_{QJL}

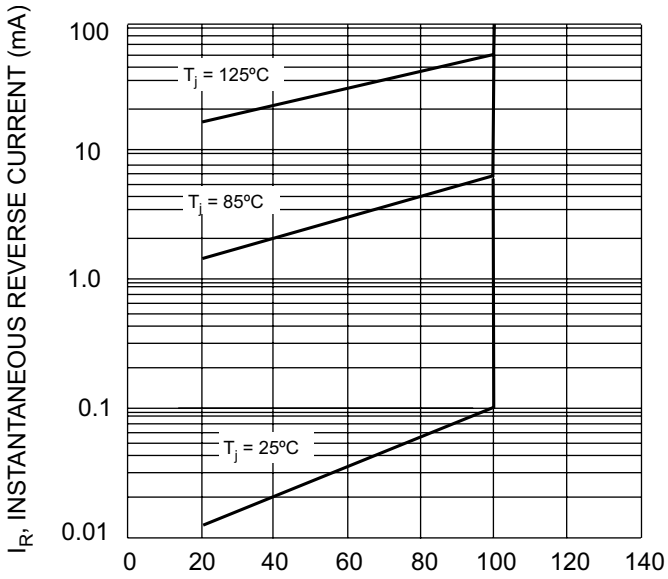


Fig. 6, Typical I_R vs. % of V_R