

NOT RECOMMENDED FOR NEW DESIGN USE SBR10U45SP5

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 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 (63)
- Polarity: Cathode Band
- Mounting Position: AnyOrdering 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 Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _R	30	40	45	V
Voltage Rate of Change		dv/dt	10,000			V/µs
Maximum Average Forward Current (Note 3)	@ T _C = 120°C	lo	9.0			А
Maximum Peak One-Cycle Surge Current	@ 5µs Sine Wave@ 10ms Sine Wave	I _{FSM}	2150 340		Α	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 2)	$R_{ heta JL}$	8.0	K/W
Operating and Storage Temperature Range	$T_{J_i} T_{STG}$	-65 to +150	°C

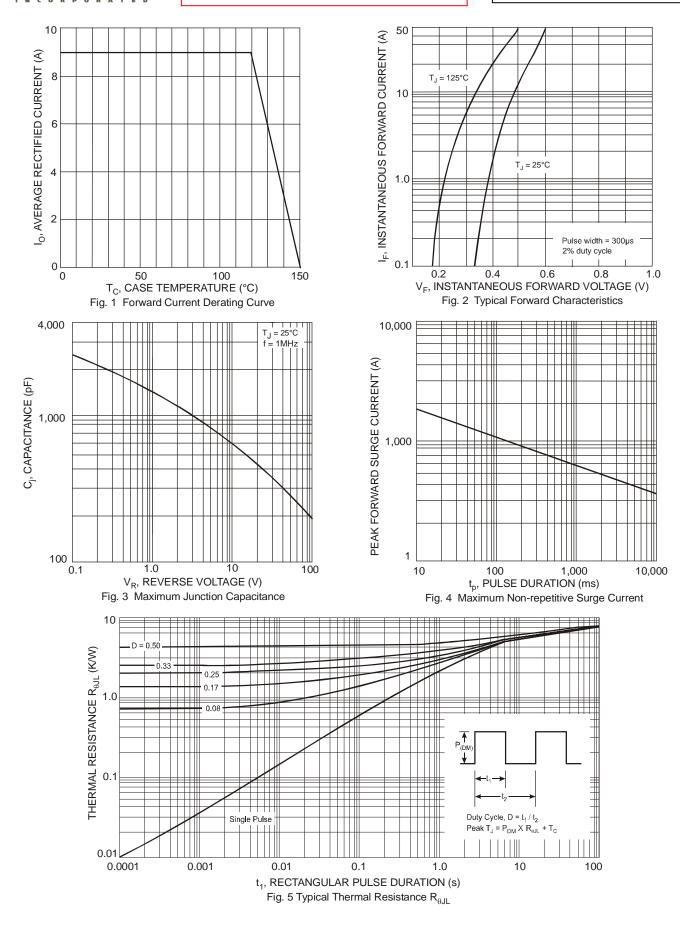
Electrical Characteristics @T_A = 25°C unless otherwise specified

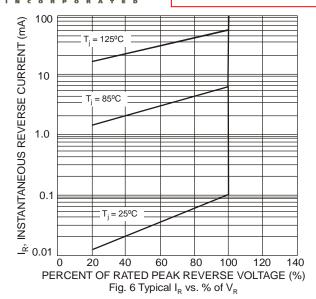
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition	
		-	-	0.48	V	$I_F = 9.0A$, $T_J = 25^{\circ}C$	
Forward Voltage (Note 4)	V _F	-	-	0.42		$I_F = 9.0A$, $T_J = 125$ °C	
g- (y	- 1	-	-	0.57		$I_F = 18A, T_J = 25^{\circ}C$	
		-	-	0.52		$I_F = 18A, T_J = 125^{\circ}C$	
Peak Reverse Current (Note 4)	1-	-	-	0.8	mA	@ Rated V _R , T _A = 25°C	
reak Neverse Current (Note 4)	IR	-	-	70		@ Rated V _R , T _A = 100°C	
Total Capacitance	Ст	-	-	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 $\leq \mu s$ Duty Cycle $\leq 2\%$.
- 5. Short duration pulse test used to minimize self-heating effect.





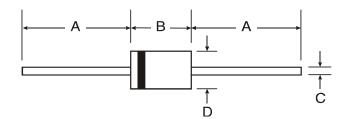


Ordering Information (Note 6)

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		
Α	25.40			
В	7.20	9.50		
С	1.20	1.30		
D	4.80	5.30		
All Dimensions in mm				

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