



SBR1A40S3

1A SBR[®] SUPER BARRIER RECTIFIER

Features

- Low Forward Voltage Drop
- Low Reverse Leakage
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, fast switching capability
- 150°C Operating Junction Temperature
- Lead Free/RoHS Compliant (Note 1)
- "Green" Device (Note 2)

Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic, "Green" Molding Compound.
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish annealed over Alloy 42 leadframe.
 Solderable per MIL-STD-202, Method 208
- Weight: 0.004 grams (approximate)



Top View

Ordering Information (Note 3)

Part Number	Case	Packaging
SBR1A40S3-7	SOD-323	3000/Tape & Reel

Notes:

- 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
- 2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com.
- 3. For packaging details, go to our website at http://www.diodes.com.

Marking Information

D4 = Product Type Marking Code



Maximum Ratings @TA = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _{RM}	40	٧
RMS Reverse Voltage	V _{R(RMS)}	28	V
Average Rectified Output Current $T_C = 65^{\circ}C$	I ₀	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	20	А

Thermal Characteristics

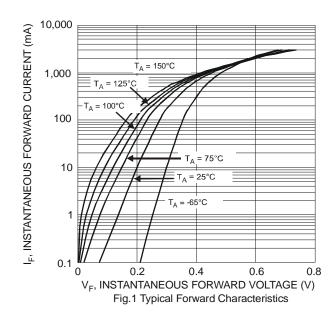
Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Thermal Resistance Junction to Ambient (Note 4) Thermal Resistance Junction to Ambient (Note 5)	R _{θJA} R _θ JA	473 407	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

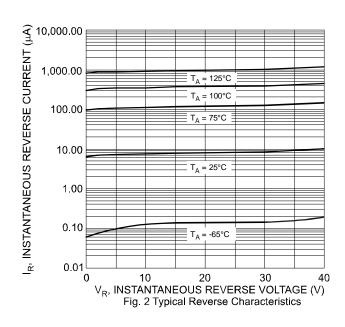
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	40	-	-	V	$I_R = 100 \mu A$
Forward Voltage Drop	V_{F}	-	-	0.55	V	$I_F = 1A, T_J = 25^{\circ}C$
Leakage Current (Note 6)	I _R	-	10	100	μΑ	$V_R = 40V, T_J = 25^{\circ}C$
Junction Capacitance	CJ	-	55	-	pF	V _R = 4.0V, f = 1MHz

Notes:

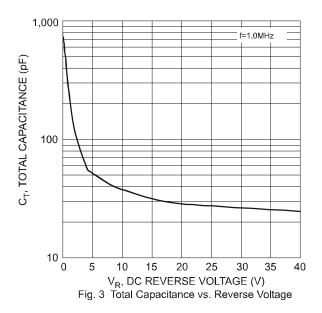
- 4. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com.
- 5. Polymide PCB, 2 oz. Copper, minimum recommended pad layout pad layout per http://www.diodes.com.
 6. Short duration pulse test used to minimize self-heating effect.

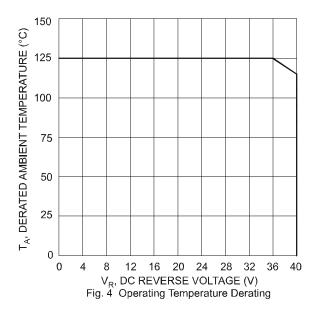




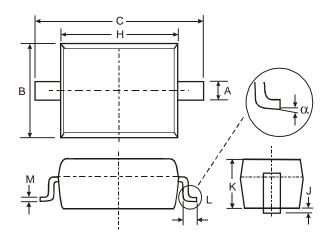
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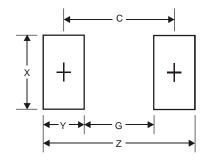


Package Outline Dimensions



SOD-323			
Dim	Min	Max	
Α	0.25	0.35	
В	1.20	1.40	
C	2.30	2.70	
Н	1.60	1.80	
J	0.00	0.10	
K	1.0	1.1	
L	0.20	0.40	
М	0.10	0.15	
α	0°	8°	
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	3.75
G	1.05
Х	0.65
Υ	1.35
С	2.40



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