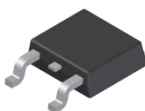


## Features

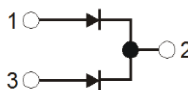
- Low Forward-Voltage Drop
- Excellent High-Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

## Mechanical Data

- Case: TO252
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Weight: 0.317 grams (Approximate)



Top View



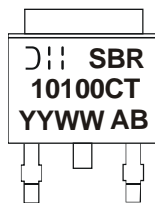
Package Pin-Out Configuration

## Ordering Information (Note 4)

Part Number	Case	Packaging
SBR10100CTL-13	TO252	2500 Pieces/Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds
  4. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information



SBR10100CT = Product Type Marking Code  
 AB = Foundry and Assembly Code  
 YYWW = Date Code Marking  
 YY = Last two digits of year (ex: 18 = 2018)  
 WW = Week (01 - 53)

**Maximum Ratings (Per Leg) @ $T_A = 25^\circ\text{C}$  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	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_{RM}$		
RMS Reverse Voltage	$V_{R(RMS)}$	71	V
Average Rectified Output Current Per Device	$I_O$	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	110	A

**Thermal Characteristics (Per Leg)**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$	22	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175	$^\circ\text{C}$

**Electrical Characteristics (Per Leg) @ $T_A = 25^\circ\text{C}$  unless otherwise specified**

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	$V_F$	—	0.77	0.84	V	$I_F = 5\text{A}, T_J = 25^\circ\text{C}$
		—	0.63	0.71		$I_F = 5\text{A}, T_J = 125^\circ\text{C}$
Leakage Current (Note 5)	$I_R$	—	—	0.2	mA	$V_R = 100\text{V}, T_J = 25^\circ\text{C}$
		—	—	25		$V_R = 100\text{V}, T_J = 125^\circ\text{C}$

- Notes:
5. Short duration pulse test used to minimize self-heating effect
  6. Device mounted on FR-4 substrate PCB, 1oz copper .with minimum recommended pad layout.
  7. Device mounted on Polyimide substrate, 1\*MRP, 2oz, copper, PCBs.

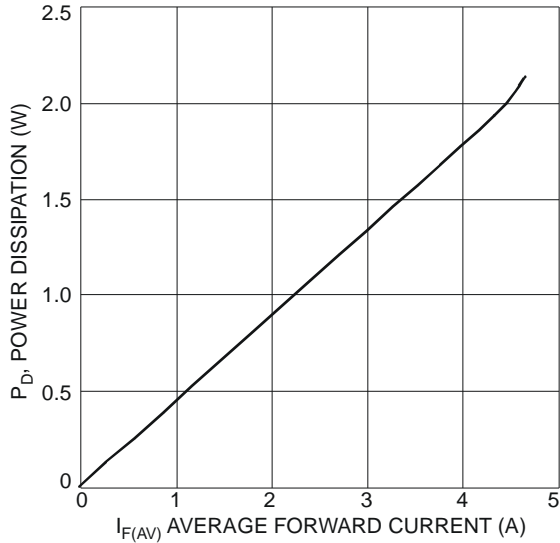


Fig. 1 Forward Power Dissipation

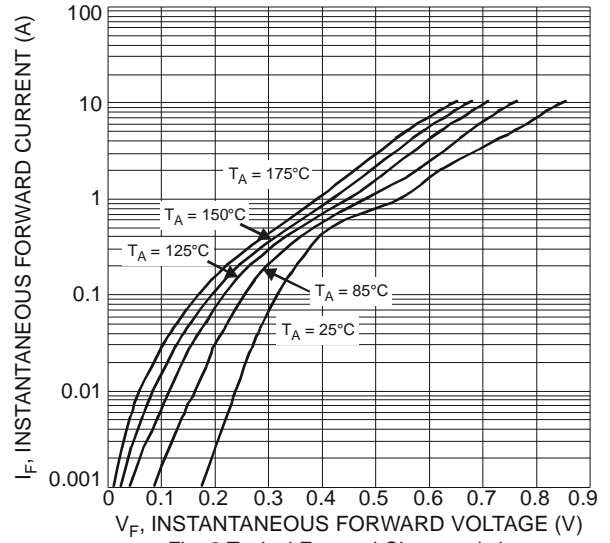


Fig. 2 Typical Forward Characteristics

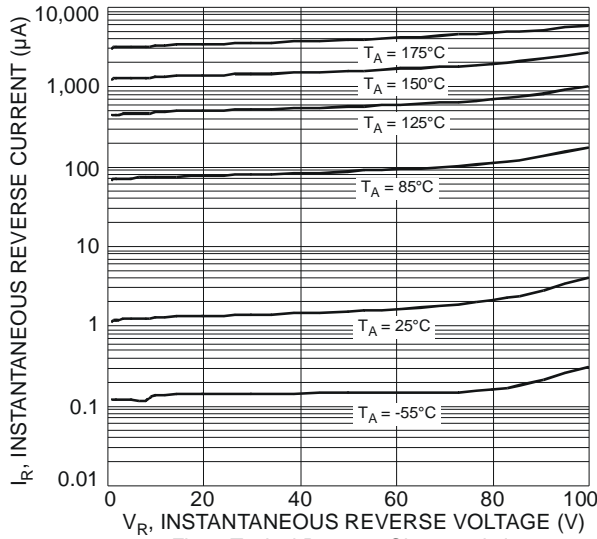


Fig. 3 Typical Reverse Characteristics

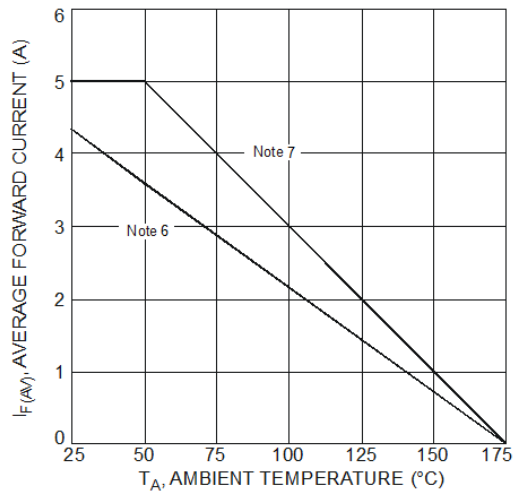
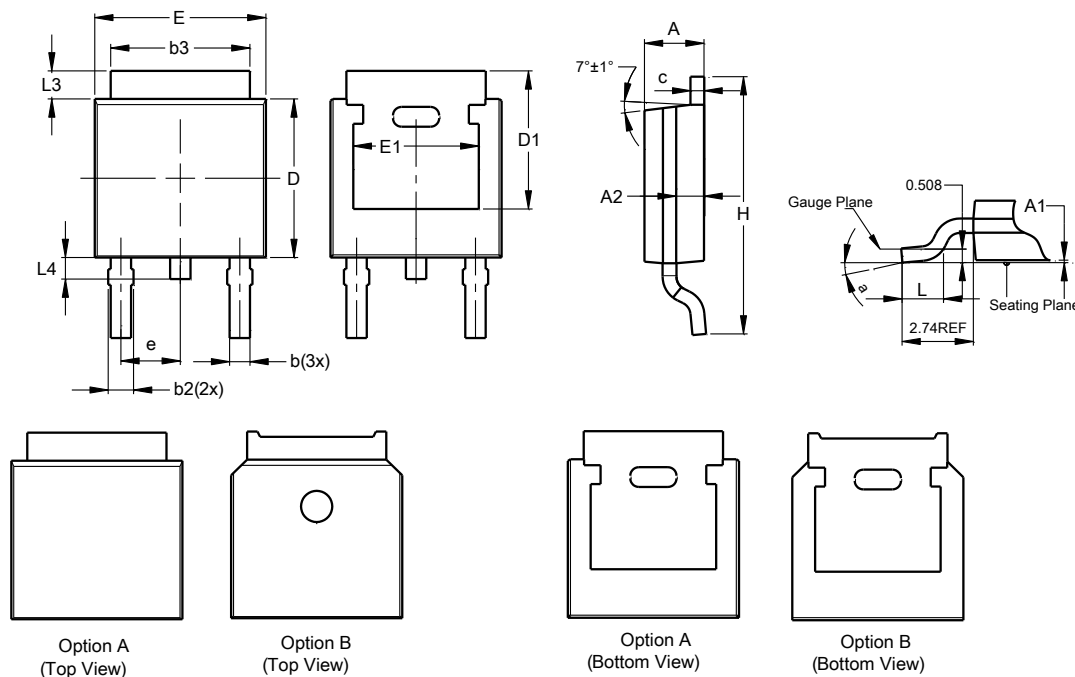


Fig. 4 Forward Current Derating Curve

## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

### TO252 (Standard)

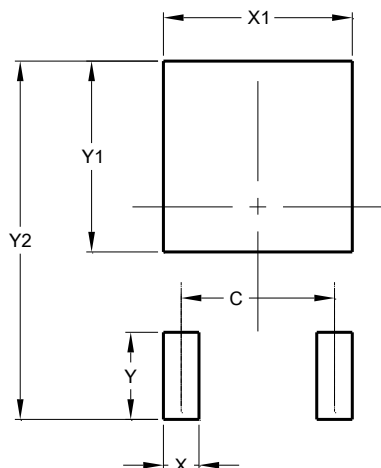


TO252 (Standard)			
Dim	Min	Max	Typ
A	2.19	2.39	2.29
A1	0.00	0.13	0.08
A2	0.97	1.17	1.07
b	0.64	0.88	0.783
b2	0.76	1.14	0.95
b3	5.21	5.46	5.33
c	0.45	0.58	0.531
D	6.00	6.20	6.10
D1	5.21	-	-
e	-	-	2.286
E	6.45	6.70	6.58
E1	4.32	-	-
H	9.40	10.41	9.91
L	1.40	1.78	1.59
L3	0.88	1.27	1.08
L4	0.60	1.02	0.83
a	0°	10°	-
All Dimensions in mm			

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

### TO252 (Standard)



Dimensions	Value (in mm)
C	4.572
X	1.060
X1	5.632
Y	2.600
Y1	5.700
Y2	10.700

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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