


## Features

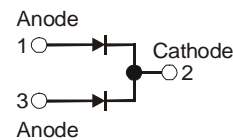
- Ultra-Low Forward Voltage Drop
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- Excellent High Temperature Stability
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **“Green” Molding Compound (No Br, Sb)**

## Mechanical Data

- Case: TO252 (DPAK)
- 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 
- Weight: 0.34 grams (approximate)



Top View



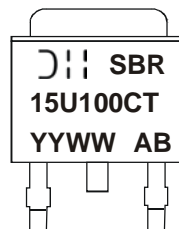
Polarity

## Ordering Information (Note 2)

Part Number	Case	Packaging
SBR15U100CTL-13	TO252	2500 pieces/reel

Notes: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2). All applicable RoHS exemptions applied.  
2. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information



SBR15U100CT = Product Type Marking Code  
AB = Foundry and Assembly Code  
YYWW = Date Code Marking  
YY = Last two digits of year (ex: 10 = 2010)  
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	$V_{RM}$		
Average Rectified Output Current per Device	(Per Leg)	7.5	A
	(Total)	15	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	100	A

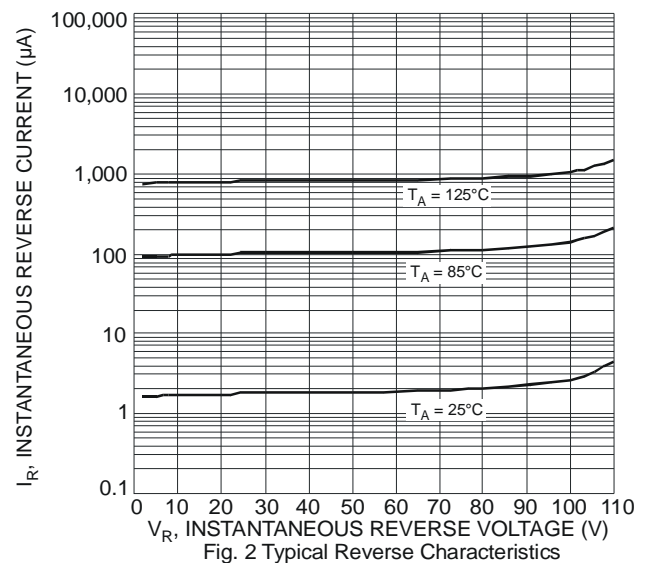
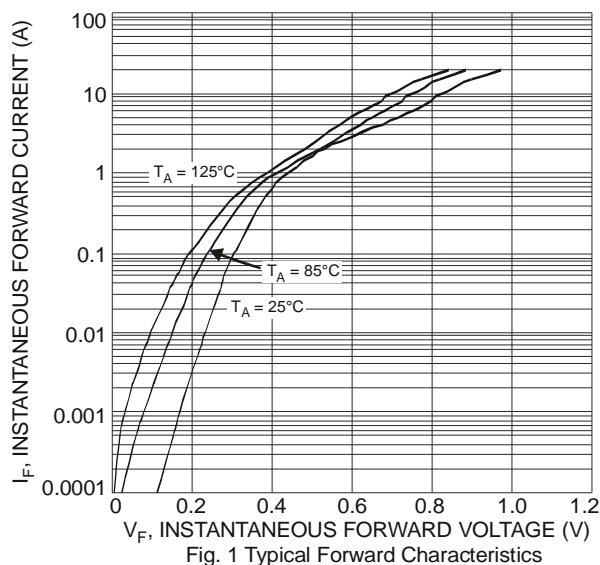
**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance	$R_{\theta JC}$	2	$^\circ\text{C/W}$
		1.5	
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	$V_F$	-	-	0.80	V	$I_F = 7.5\text{A}, T_J = 25^\circ\text{C}$
		-	0.67	0.71		$I_F = 7.5\text{A}, T_J = 125^\circ\text{C}$
Leakage Current (Note 3)	$I_R$	-	-	80	$\mu\text{A}$	$V_R = 100\text{V}, T_J = 25^\circ\text{C}$
		-	1.1	10	mA	$V_R = 100\text{V}, T_J = 125^\circ\text{C}$
		-	3.2	-		$V_R = 100\text{V}, T_J = 150^\circ\text{C}$

Notes: 3. Short duration pulse test used to minimize self-heating effect.



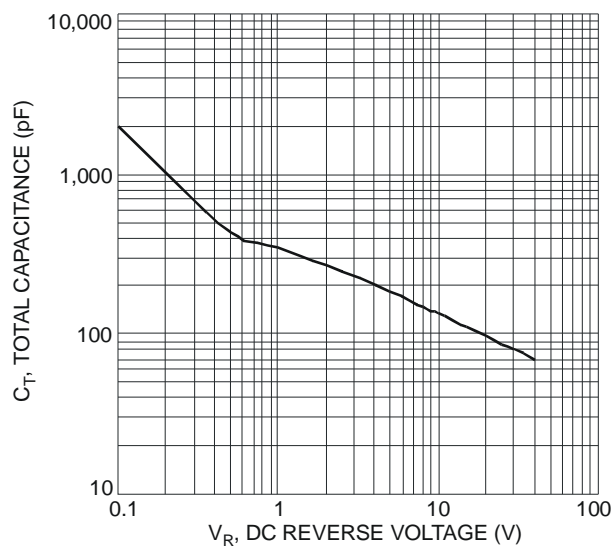


Fig. 3 Total Capacitance vs. Reverse Voltage

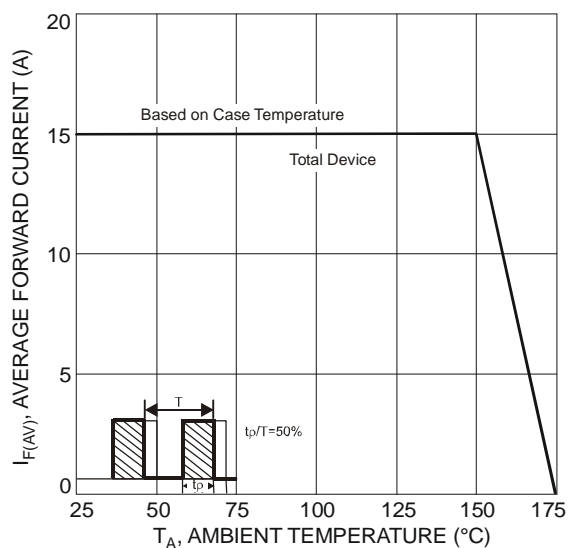


Fig. 4 Forward Current Derating Curve

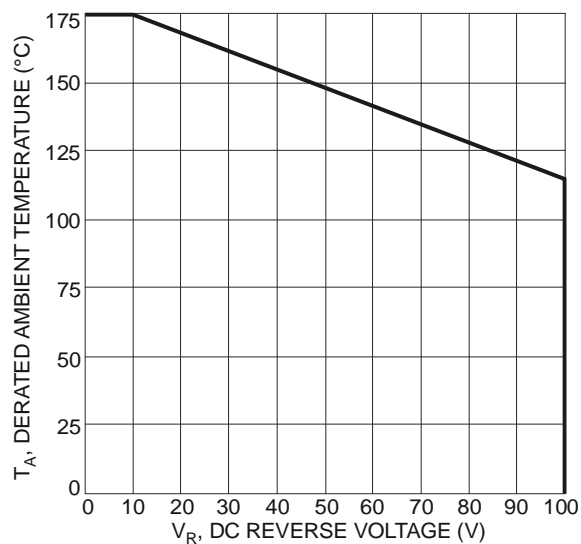
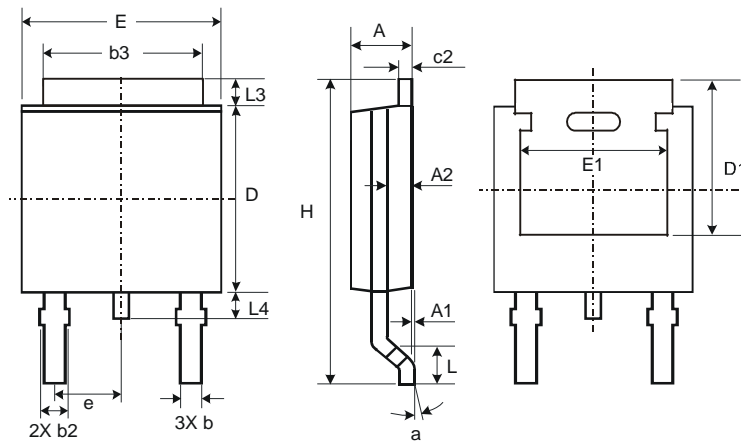


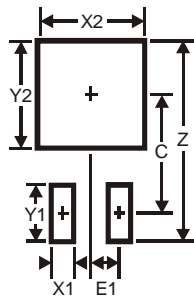
Fig. 5 Operating Temperature Derating

## Package Outline Dimensions



TO252			
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
c2	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	0.64	1.02	0.83
a	0°	10°	—
All Dimensions in mm			

## Suggested Pad Layout



Dimensions	Value (in mm)
Z	11.6
X1	1.5
X2	7.0
Y1	2.5
Y2	7.0
C	6.9
E1	2.3

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