
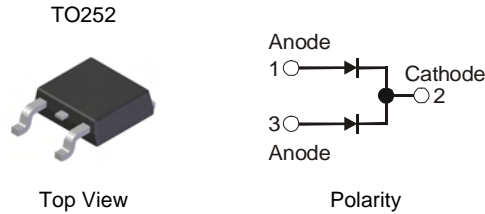


Features

- 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)

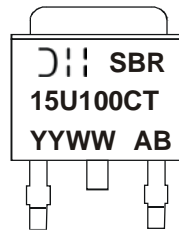


Ordering Information (Note 2)

| 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 |

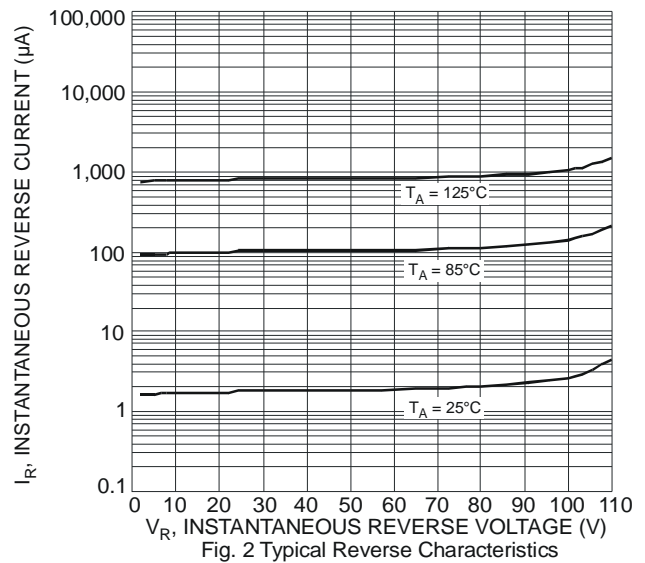
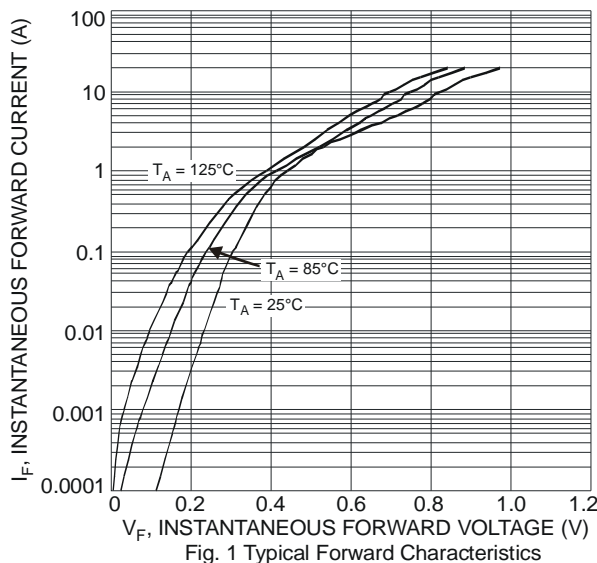
Thermal Characteristics

| 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 | μA | $V_R = 100\text{V}, T_J = 25^\circ\text{C}$ |
| | | - | 1.1 | 10 | mA | $V_R = 100\text{V}, T_J = 125^\circ\text{C}$ |
| | | - | 3.2 | - | mA | $V_R = 100\text{V}, T_J = 150^\circ\text{C}$ |

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



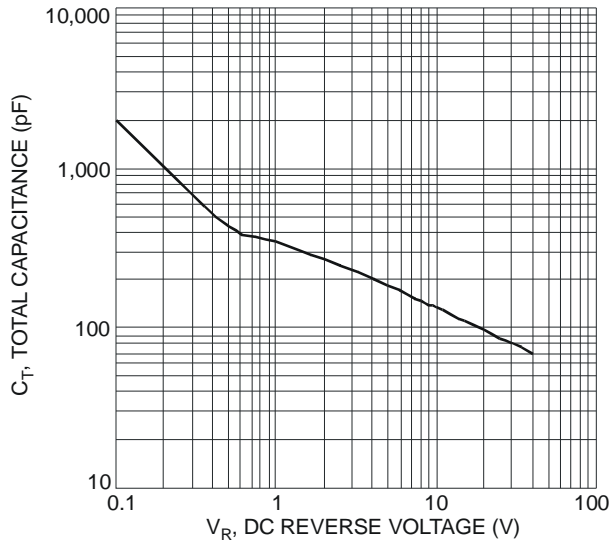


Fig. 3 Total Capacitance vs. Reverse Voltage

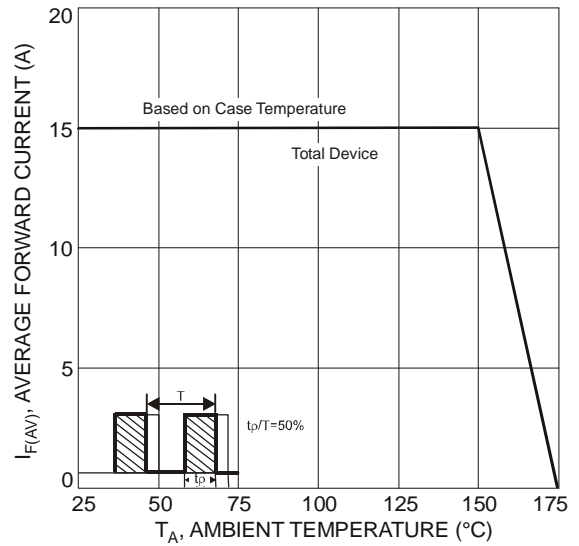


Fig. 4 Forward Current Derating Curve

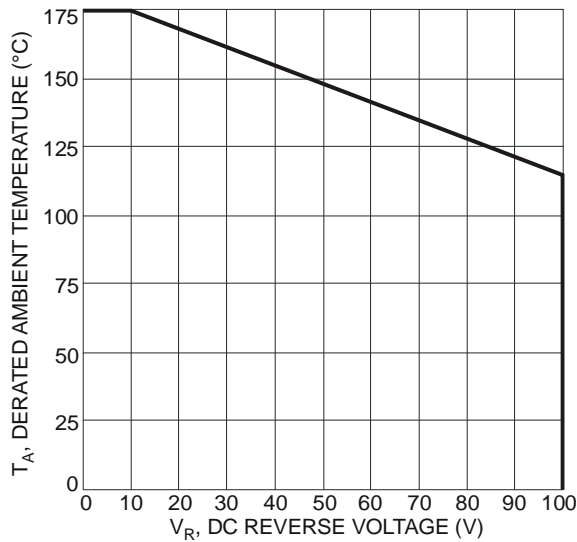
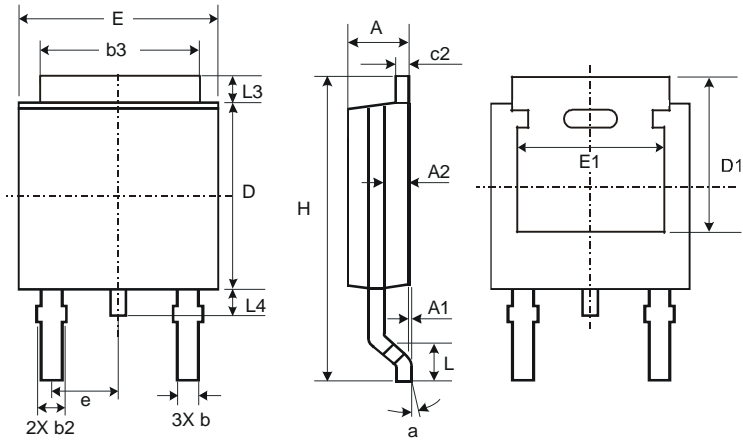


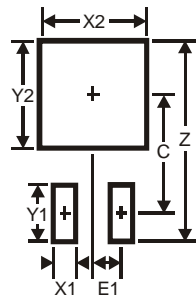
Fig. 5 Operating Temperature Derating

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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