
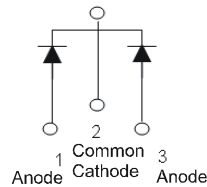


Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- **Lead Free Finish, RoHS Compliant (Note 1)**

Mechanical Data

- Case: TO-247AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish — Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208 
- Polarity: As Marked on Body
- Weight: 5.6 grams (approximate)



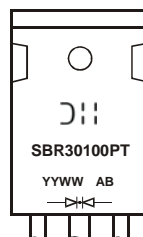
Package Pin Out
Configuration

Ordering Information (Note 2)

| Part Number | Case | Packaging |
|-------------|--------|----------------|
| SBR30100PT | TO-247 | 30 pieces/tube |

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

Marking Information



SBR30100PT = Product Type Marking Code
 AB = Foundry and Assembly Code
 YYWW = Date Code Marking
 YY = Last two digits of year (ex: 07 = 2007)
 WW = Week (01 - 53)

Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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 @ $T_C = 140^\circ\text{C}$ | I_O | 30 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I_{FSM} | 200 | A |

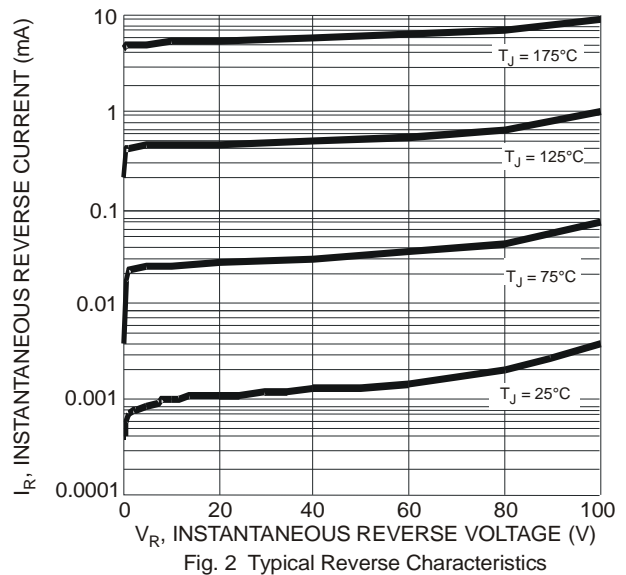
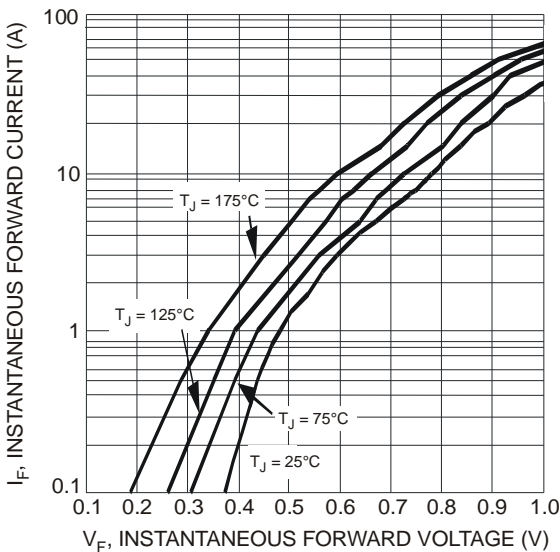
Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|-----------------|-------------|--------------------|
| Maximum Thermal Resistance (per leg) (Note 3) | $R_{\theta JC}$ | 2 | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -65 to +175 | $^\circ\text{C}$ |

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|------------------------------------|-------------|-----|-----|-----------|------|---|
| Reverse Breakdown Voltage (Note 4) | $V_{(BR)R}$ | 100 | - | - | V | $I_R = 100\mu\text{A}$ |
| Forward Voltage Drop (per leg) | V_F | - | - | 0.90 | V | $I_F = 15\text{A}, T_J = 25^\circ\text{C}$ |
| Leakage Current (Note 4) | I_R | - | - | 0.1 10 | mA | $V_R = 100\text{V}, T_J = 25^\circ\text{C}$ $V_R = 100\text{V}, T_J = 125^\circ\text{C}$ |

Notes: 3. Device mounted on heatsink (Black Aluminum, 37mm x 15mm x 50mm)
4. Short duration pulse test used to minimize self-heating effect.



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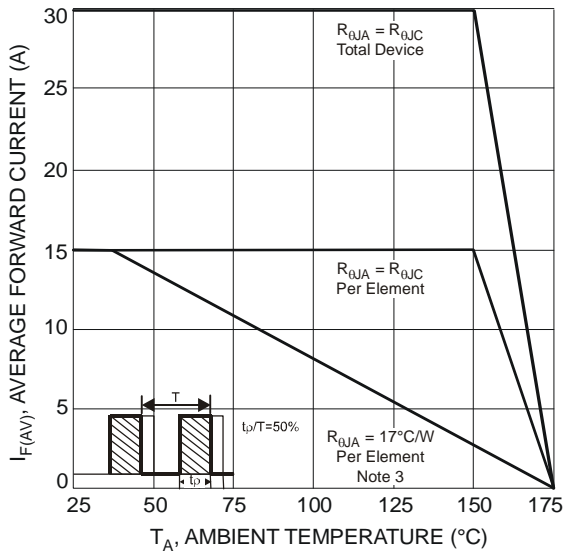
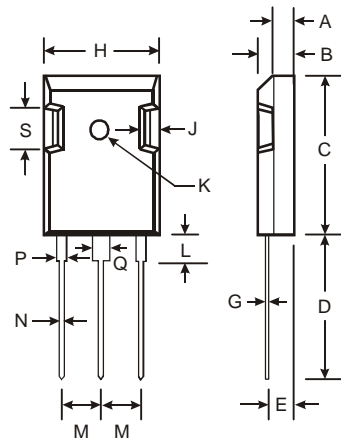


Fig. 3 Forward Current Derating Curve

Package Outline Dimensions



| TO-247 | | |
|-----------------------------|-------------------|-------------------|
| Dim | Min | Max |
| A | 1.9 | 2.1 |
| B | 4.85 | 5.15 |
| C | 20.3 | 21.75 |
| D | 19.60 | 20.1 |
| E | 2.2 | 2.6 |
| G | 0.51 | 0.76 |
| H | 15.45 | 16.25 |
| J | 1.93 | 2.18 |
| K | 2.9 \varnothing | 3.2 \varnothing |
| L | 3.78 | 4.38 |
| M | 5.2 | 5.7 |
| N | 1.0 | 1.4 |
| P | 1.8 | 2.2 |
| Q | 2.8 | 3.2 |
| S | 4.4 Typ | |
| All Dimensions in mm | | |

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