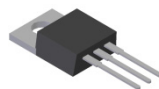
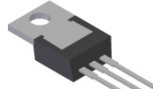


Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 2)**
- **Also Available in Green Molding Compound (Note 5)**




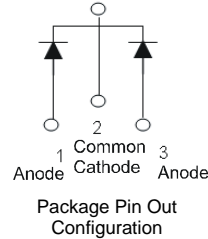
TO-220AB
Top View



TO-220AB
Bottom View

Mechanical Data

- Case: TO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 1.85 grams (approximate)



Maximum Ratings @T_A = 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} | 45 | V |
| Average Rectified Output Current @ T _C = 150°C | I _O | 60 | A |
| Non-Repetitive Peak Forward Surge Current 8.3mS Single Half Sine-Wave Superimposed on rated load | I _{FSM} | 280 | A |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|-----------------------------------|-------------|------|
| Typical Thermal Resistance (Per Leg) Thermal Resistance Junction to Case | R _{θJC} | 2 | °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 | Typ | Max | Unit | Test Condition |
|--------------------------------|----------------|-----|--------------|--------------|------|---|
| Forward Voltage Drop (per leg) | V _F | - | 0.50 0.49 | 0.55 0.53 | V | I _F = 30A, T _J = 25°C I _F = 30A, T _J = 125°C |
| Leakage Current (Note 1) | I _R | - | 0.25 20 | 1 200 | mA | V _R = 45V, T _J = 25°C V _R = 45V, T _J = 125°C |

Notes: 1. Short duration pulse test used to minimize self-heating effect.
2. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see *EU Directive 2002/95/EC Annex Notes*.

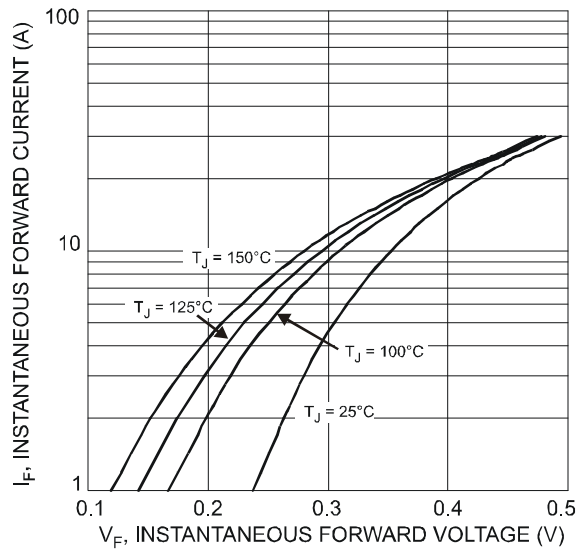


Fig. 1 Typical Forward Characteristics

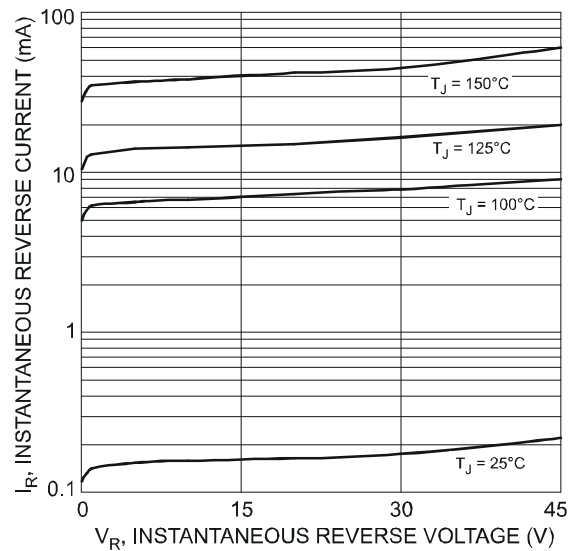


Fig. 2 Typical Reverse Characteristics

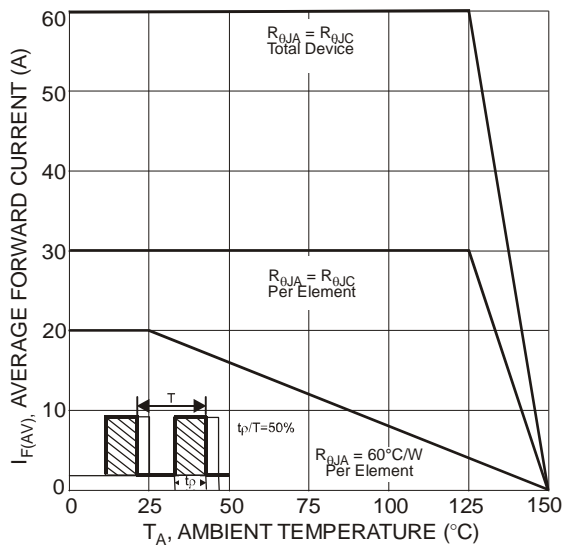


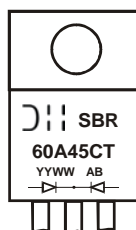
Fig. 3 Forward Current Derating Curve

Ordering Information (Notes 3 & 4)

| Part Number | Case | Packaging |
|--------------|----------|----------------|
| SBR60A45CT | TO-220AB | 50 pieces/tube |
| SBR60A45CT-G | TO-220AB | 50 pieces/tube |

- Notes:
3. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
 4. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR60A45CT-G.

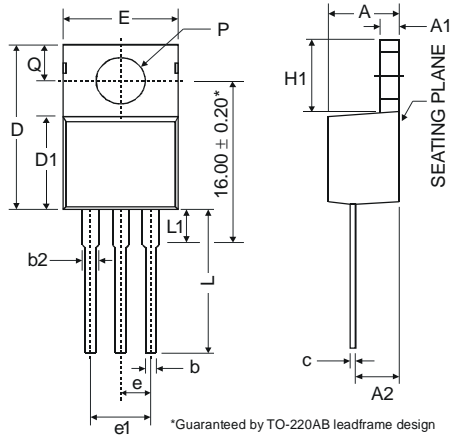
Marking Information



SBR60A45CT = Product Type Marking Code
 AB = Foundry and Assembly Code
 YYWW = Date Code Marking
 YY = Last two digits of year (ex: 07 = 2007)
 WW = Week (01-52)

SBR is a registered trademark of Diodes Incorporated.

Package Outline Dimensions



| TO-220AB | | | |
|----------------------|-------|------|-------|
| Dim | Min | Typ | Max |
| A | 3.56 | - | 4.82 |
| A1 | 0.51 | - | 1.39 |
| A2 | 2.04 | - | 2.92 |
| b | 0.39 | 0.81 | 1.01 |
| b2 | 1.15 | 1.24 | 1.77 |
| c | 0.356 | - | 0.61 |
| D | 14.22 | - | 16.51 |
| D1 | 8.39 | - | 9.01 |
| e | 2.54 | | |
| e1 | 5.08 | | |
| E | 9.66 | - | 10.66 |
| H1 | 5.85 | - | 6.85 |
| L | 12.70 | - | 14.73 |
| L1 | - | - | 6.35 |
| P | 3.54 | - | 4.08 |
| Q | 2.54 | - | 3.42 |
| All Dimensions in mm | | | |

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