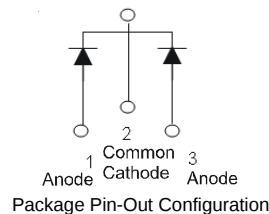


## Features

- Low Forward Voltage Drop
- Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **Also Available in Green Molding Compound (Note 2)**

## Mechanical Data

- Case: D<sup>2</sup>Pak
- 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 
- Weight: 1.6 grams (approximate)



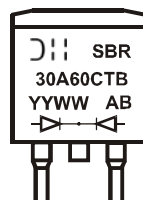
## Ordering Information (Notes 2 & 3)

| Part Number      | Case               | Packaging       |
|------------------|--------------------|-----------------|
| SBR30A60CTB      | D <sup>2</sup> Pak | 50 pieces/tube  |
| SBR30A60CTB-G    | D <sup>2</sup> Pak | 50 pieces/tube  |
| SBR30A60CTB-13   | D <sup>2</sup> Pak | 800/Tape & Reel |
| SBR30A60CTB-13-G | D <sup>2</sup> Pak | 800/Tape & Reel |

Notes:

1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes
2. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR30A60CTB-G.
3. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information



SBR30A60CTB = Product Type Marking Code  
 AB = Foundry and Assembly Code  
 YYWW = Date Code Marking  
 YY = Last two digits of year (ex: 08 = 2008)  
 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                                                                     | $V_{RRM}$ | 60       | V    |
| Working Peak Reverse Voltage                                                                        | $V_{RWM}$ |          |      |
| DC Blocking Voltage                                                                                 | $V_{RM}$  |          |      |
| Average Rectified Output Current (Per Leg)<br>(Total)                                               | $I_O$     | 15<br>30 | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single Half Sine-Wave Superimposed on Rated Load | $I_{FSM}$ | 180      | A    |

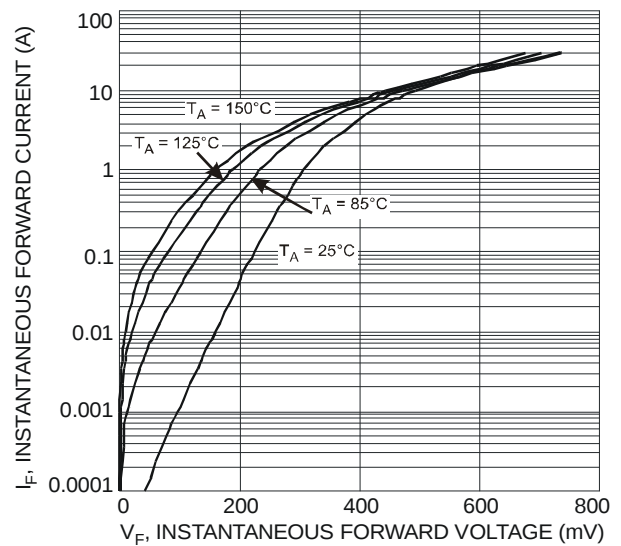
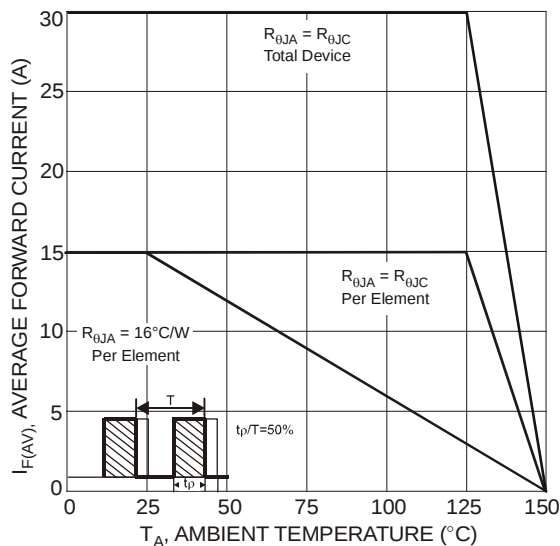
**Thermal Characteristics (Per Leg)**

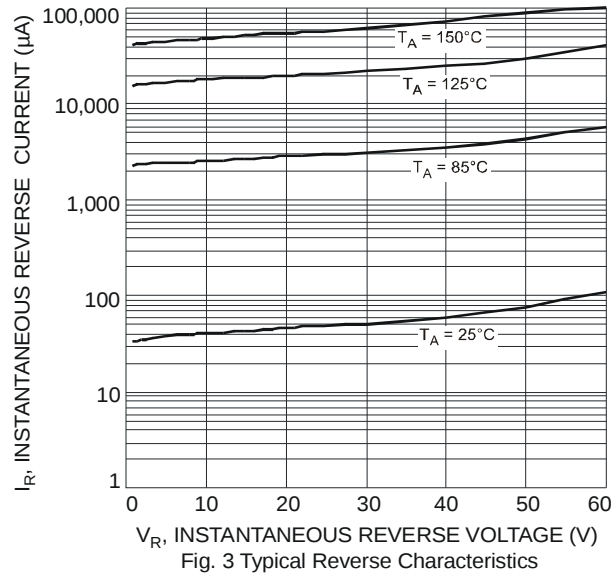
| Characteristic                              | Symbol          | Value       | Unit               |
|---------------------------------------------|-----------------|-------------|--------------------|
| Maximum Thermal Resistance Junction to Case | $R_{\theta JC}$ | 2           | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range     | $T_J, T_{STG}$  | -65 to +150 | $^\circ\text{C}$   |

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

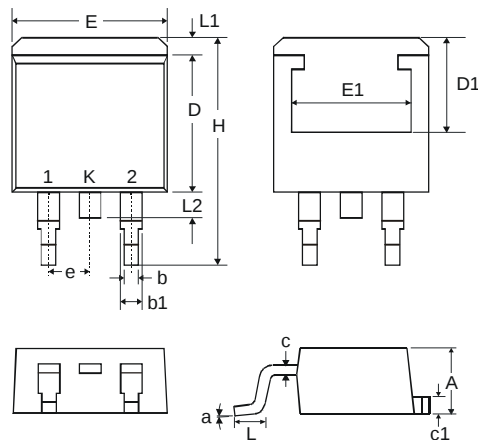
| Characteristic                 | Symbol | Min | Typ       | Max          | Unit | Test Condition                                                                            |
|--------------------------------|--------|-----|-----------|--------------|------|-------------------------------------------------------------------------------------------|
| Forward Voltage Drop (per leg) | $V_F$  | -   | 0.56<br>- | 0.63<br>0.60 | V    | $I_F = 15\text{A}, T_J = 25^\circ\text{C}$<br>$I_F = 15\text{A}, T_J = 125^\circ\text{C}$ |
| Leakage Current (Note 4)       | $I_R$  | -   | -         | 0.5<br>100   | mA   | $V_R = 60\text{V}, T_J = 25^\circ\text{C}$<br>$V_R = 60\text{V}, T_J = 125^\circ\text{C}$ |

Notes: 4. Short duration pulse test used to minimize self-heating effect.



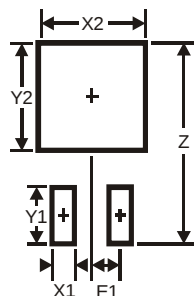


## Package Outline Dimensions



| D <sup>2</sup> PAK   |          |       |
|----------------------|----------|-------|
| Dim                  | Min      | Max   |
| A                    | 4.07     | 4.82  |
| b                    | 0.51     | 0.99  |
| b1                   | 1.15     | 1.77  |
| c                    | 0.356    | 0.58  |
| c1                   | 1.143    | 1.65  |
| D                    | 8.39     | 9.65  |
| D1                   | 6.55     | —     |
| E                    | 9.66     | 10.66 |
| E1                   | 6.23     | —     |
| e                    | 2.54 Typ |       |
| H                    | 14.61    | 15.87 |
| L                    | 1.78     | 2.79  |
| L1                   | —        | 1.67  |
| L2                   | —        | 1.77  |
| a                    | 0°       | 8°    |
| All Dimensions in mm |          |       |

## Suggested Pad Layout



| Dimensions | Value (in mm) |
|------------|---------------|
| Z          | 16.9          |
| X1         | 1.1           |
| X2         | 10.8          |
| Y1         | 3.5           |
| Y2         | 7.01          |
| E1         | 2.5           |

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