

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)**
- **Also Available in Green Molding Compound (Note 2)**

Mechanical Data

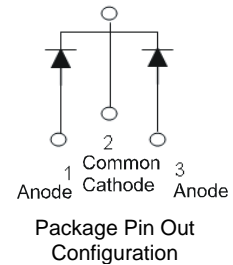
- Case: TO-220AB, ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 ⁽³⁾
- Weight: TO-220AB – 1.85 grams (approximate)
ITO-220AB – 1.65 grams (approximate)

TO-220AB
Top View

TO-220AB
Bottom View

ITO-220AB
Top View

ITO-220AB
Bottom View

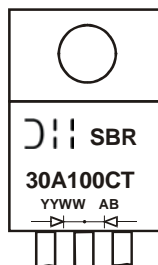


Ordering Information (Notes 2 & 3)

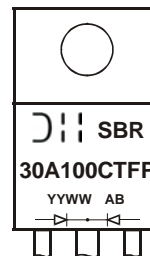
Part Number	Case	Packaging
SBR30A100CT	TO-220AB	50 pieces/tube
SBR30A100CT-G	TO-220AB	50 pieces/tube
SBR30A100CTFP	ITO-220AB	50 pieces/tube
SBR30A100CTFP-G	ITO-220AB	50 pieces/tube
SBR30A100CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube
SBR30A100CTFP-JT-G	ITO-220AB (Alternate)	50 pieces/tube

- Notes: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
2. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR30A100CT-G.
3. For packaging details, go to our website at <http://www.diodes.com>.

Marking Information



SBR30A100CT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 06 = 2006)
WW = Week (01 - 53)



SBR30A100CTFP = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 06 = 2006)
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) (Total)	I_O	15 30	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	250	A
Peak Repetitive Reverse Surge Current (2 μ S-1Khz)	I_{RRM}	3	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink $t = 3$ sec.	V_{AC}	2000	V

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Package = TO-220AB Package = ITO-220AB	$R_{\theta JC}$	2 4	$^\circ\text{C/W}$
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	-	- 0.63	0.80 0.67	V	$I_F = 15\text{A}, T_J = 25^\circ\text{C}$ $I_F = 15\text{A}, T_J = 125^\circ\text{C}$
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: 4. Short duration pulse test used to minimize self-heating effect.

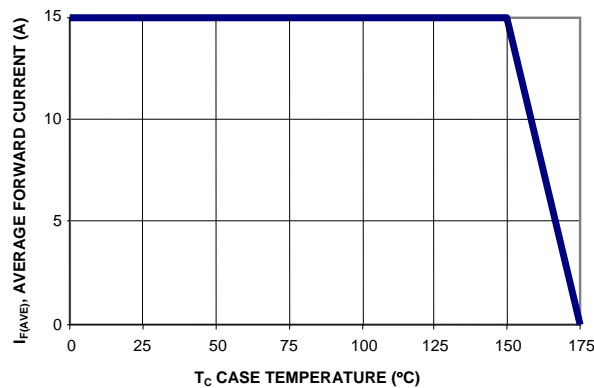
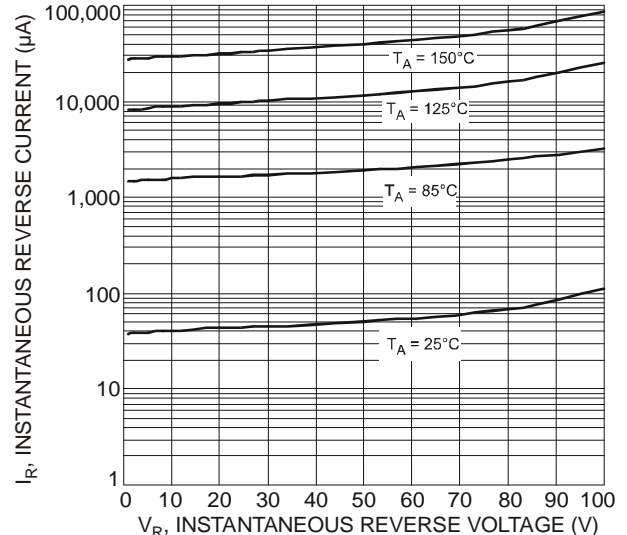
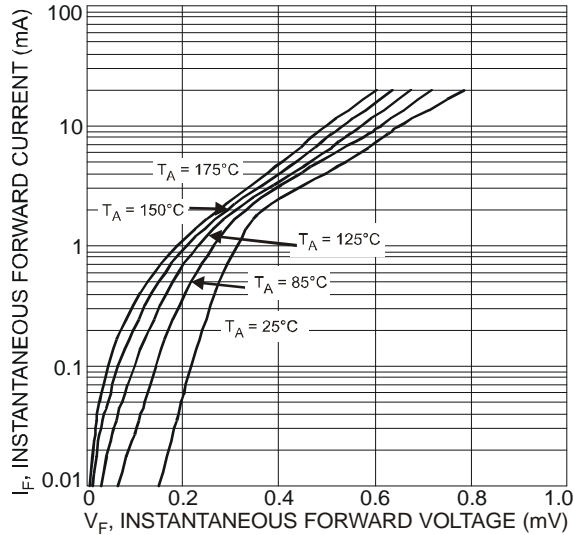
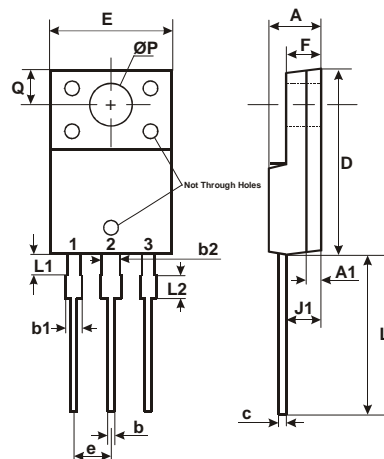
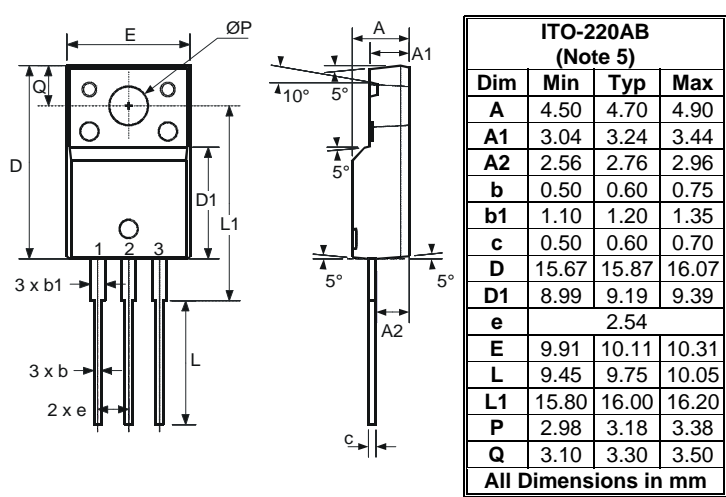
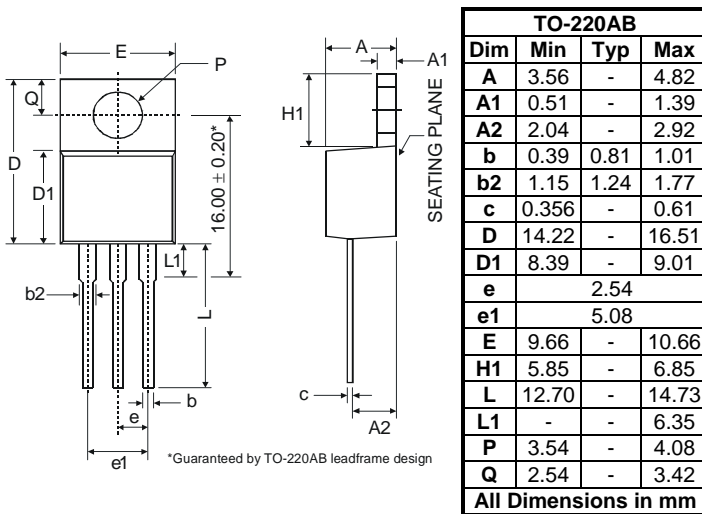


Figure 1: Current Derating Curve, Per Element



Package Outline Dimensions



Notes: 5. For product manufactured with Date Code 0733 (week 33, 2007) and newer, please refer to ITO-220AB dimensions. For product manufactured prior to Date Code 0733, please refer to ITO-220AB ALTERNATE dimensions.

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