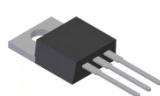


Features

- 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

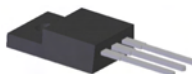
- Case: TO-220AB, ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 
- Weight: TO-220AB – 1.85 grams (approximate)
ITO-220AB – 1.65 grams (approximate)



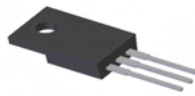
TO-220AB
Top View



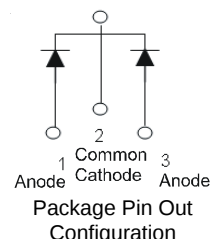
TO-220AB
Bottom View



ITO-220AB
Top View



ITO-220AB
Bottom View

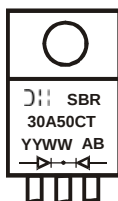


Ordering Information (Notes 2 & 3)

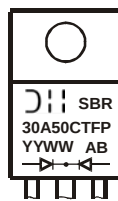
Part Number	Case	Packaging
SBR30A50CT	TO-220AB	50 pieces/tube
SBR30A50CT-G	TO-220AB	50 pieces/tube
SBR30A50CTFP	ITO-220AB	50 pieces/tube
SBR30A50CTFP-G	ITO-220AB	50 pieces/tube
SBR30A50CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube

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: SBR30A50CT-G.
3. For packaging details, go to our website at <http://www.diodes.com>.

Marking Information



SBR30A50CT = Product Type Marking Code
 = Manufacturers' Code Marking
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 06 = 2006)
WW = Week (01 - 53)



SBR30A50CTFP = Product Type Marking Code
 = Manufacturers' Code Marking
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°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}	50	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}	260	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink t = 3 sec.	V _{AC}	2000	V

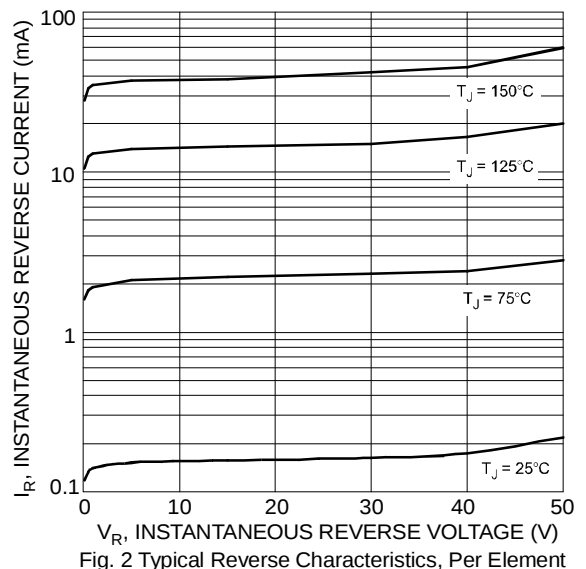
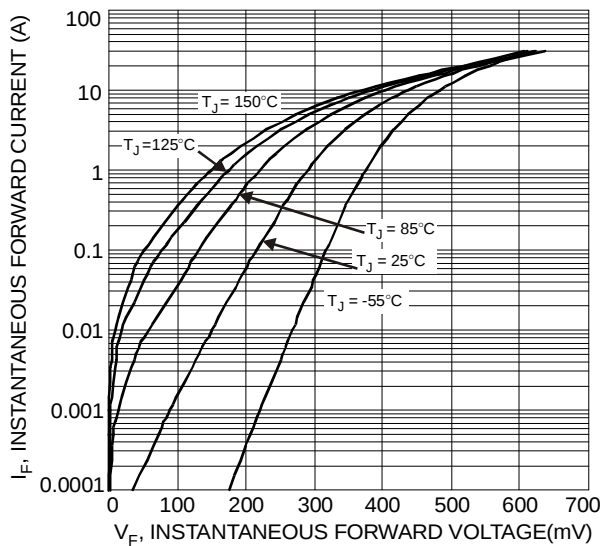
Thermal Characteristics (Per Leg)

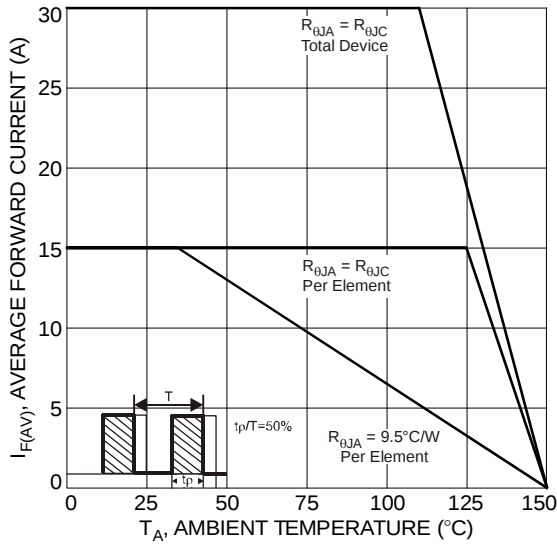
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance	R _{θJA} R _{θJC}	9.5 2	°C/W
Thermal Resistance Junction to Ambient (Note 4)			
Thermal Resistance Junction to Case			
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics (Per Leg) @T_A = 25°C unless otherwise specified

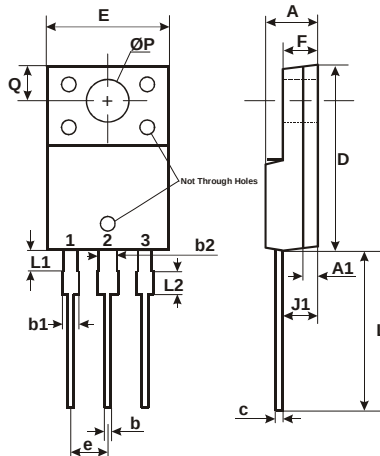
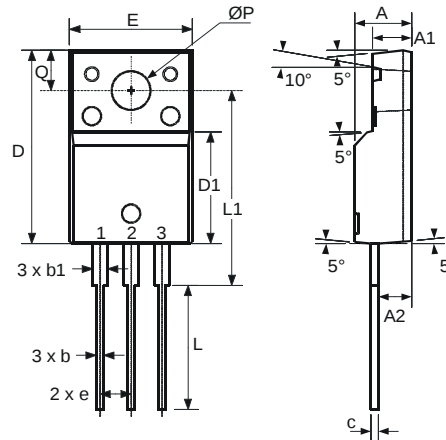
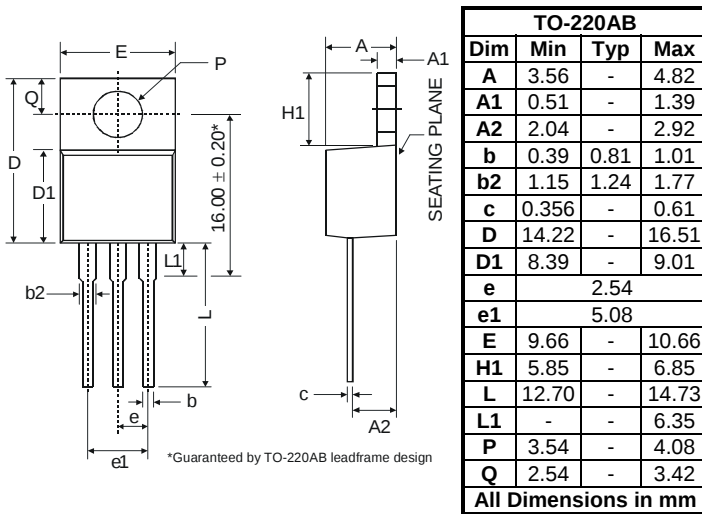
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	-	0.55 0.50	V	I _F = 15A, T _J = 25°C I _F = 15A, T _J = 125°C
Leakage Current (Note 5)	I _R	-	-	0.5 100	mA	V _R = 50V, T _J = 25°C V _R = 50V, T _J = 125°C

Notes: 4. Test with additional heatsink, (Black Aluminum, 50mm*37mm*15mm)
5. Short duration pulse test used to minimize self-heating effect.





Package Outline Dimensions



Notes: 6. 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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SBR30A50

Document number: DS31136 Rev. 5 - 2

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