

40A SBR[®] SUPER BARRIER RECTIFIER

Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Also Available in Green Molding Compound
 - Halogen and Antimony Free. "Green" Device (Note 3)

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

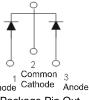
TO-220AB Bottom View



ITO-220AB Top View



ITO-220AB Bottom View



Package Pin Out Configuration

Ordering Information (Notes 4 and 5)

	Part Number	Case	Packaging
Pb	SBR4045CT	TO-220AB	50 pieces/tube
(PD) Green	SBR4045CT-G	TO-220AB	50 pieces/tube
Pb	SBR4045CTFP	ITO-220AB	50 pieces/tube
PD, Green	SBR4045CTFP-G	ITO-220AB	50 pieces/tube
₽b)	SBR4045CTFP-JT	ITO-220AB((Alternate)	50 pieces/tube

1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.

2. See http://www.diodes.com for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.

3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

4. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR4045CT-G.

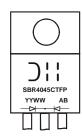
5. For packaging details, go to our website at http://www.diodes.com.

Marking Information

Notes:



SBR4045CT = 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)



SBR4045CTFP = 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°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

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 Per Device (Per Leg) (Total)	lo	20 40	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	280	A
Peak Repetitive Reverse Surge Current (2µS-1Khz)	I _{RRM}	2	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 _θ JC	2 4	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

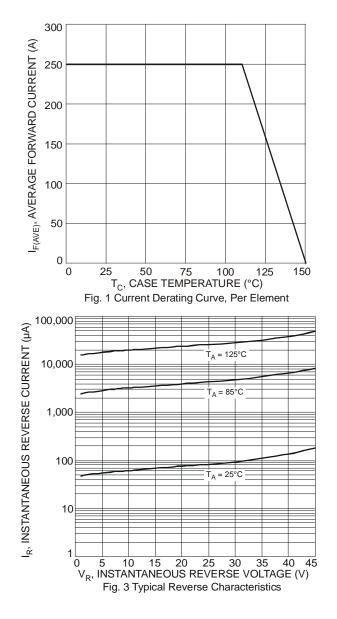
Electrical Characteristics (Per Leg) @T_A = 25°C unless otherwise specified

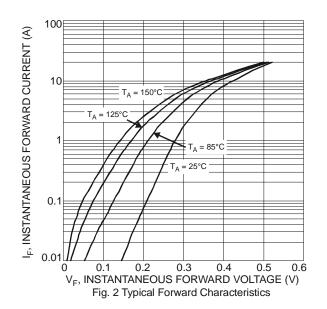
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	VF	-	- 0.47	0.55 0.50	V	I _F = 20A, T _J = 25°C I _F = 20A, T _J = 125°C
Leakage Current (Note 6)	I _R	-	-	0.5 100	mA	V _R = 45V, T _J = 25°C V _R = 45V, T _J = 125°C

Notes: 6. Short duration pulse test used to minimize self-heating effect.



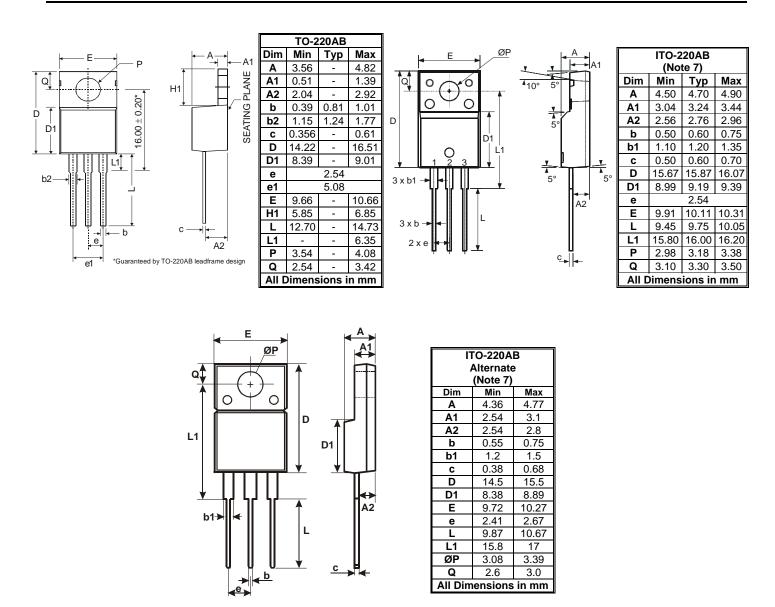
SBR4045CT SBR4045CTFP







Package Outline Dimensions



Notes: 7. 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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