



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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## Contact us

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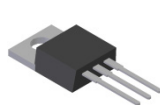


## Features

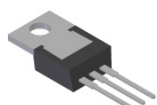
- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- $\pm 10\text{kV}$  ESD Protection Per IEC 61000-4-2
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **Also Available in Green Molding Compound (Note 2)**

## Mechanical Data

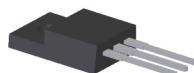
- Case: TO-220AB, ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 <sup>(3)</sup>
- Weight: TO-220AB – 1.85 grams (approximate)  
ITO-220AB – 1.65 grams (approximate)



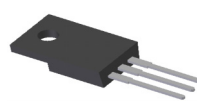
TO-220AB  
Top View



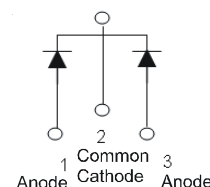
TO-220AB  
Bottom View



ITO-220AB  
Top View



ITO-220AB  
Bottom View



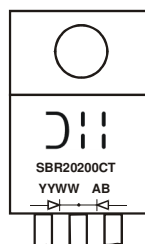
Package Pin Out  
Configuration

## Ordering Information (Notes 2 & 3)

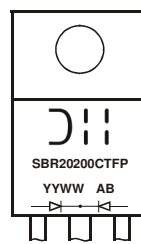
Part Number	Case	Packaging
SBR20200CT	TO-220AB	50 pieces/tube
SBR20200CT-G	TO-220AB	50 pieces/tube
SBR20200CTFP	ITO-220AB	50 pieces/tube
SBR20200CTFP-G	ITO-220AB	50 pieces/tube
SBR20200CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube
SBR20200CTFP-JT-G	ITO-220AB (Alternate)	50 pieces/tube

Notes: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2). All applicable RoHS exemptions applied.  
2. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR20200CT-G.  
3. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information



SBR20200CT = Product Type Marking Code  
AB = Foundry and Assembly Code  
YYWW = Date Code Marking  
YY = Last two digits of year (ex: 12 = 2012)  
WW = Week (01 - 53)



SBR20200CTFP = Product Type Marking Code  
AB = Foundry and Assembly Code  
YYWW = Date Code Marking  
YY = Last two digits of year (ex: 12 = 2012)  
WW = Week (01 - 53)

**Maximum Ratings (Per Leg) @T<sub>A</sub> = 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 <sub>RRM</sub>	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Average Rectified Output Current Per Device (Per Leg) (Total)	I <sub>O</sub>	10 20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	150	A
Peak Repetitive Reverse Surge Current (2uS-1KHz)	I <sub>RRM</sub>	2	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink t = 3 sec.	V <sub>AC</sub>	2000	V

**Thermal Characteristics (Per Leg)**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 4) Package = TO-220AB Package = ITO-220AB	R <sub>θJC</sub>	2 4	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

**Electrical Characteristics (Per Leg) @T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	-	- 0.71	0.98 0.78	V	I <sub>F</sub> = 10A, T <sub>J</sub> = 25°C I <sub>F</sub> = 10A, T <sub>J</sub> = 125°C
Leakage Current (Note 5)	I <sub>R</sub>	-	-	0.1 10	mA	V <sub>R</sub> = 200V, T <sub>J</sub> = 25°C V <sub>R</sub> = 200V, T <sub>J</sub> = 125°C

Notes: 4. Device mounted on heatsink (Black Aluminum, 37mm\*50mm\*15mm).  
 5. Short duration pulse test used to minimize self-heating effect.

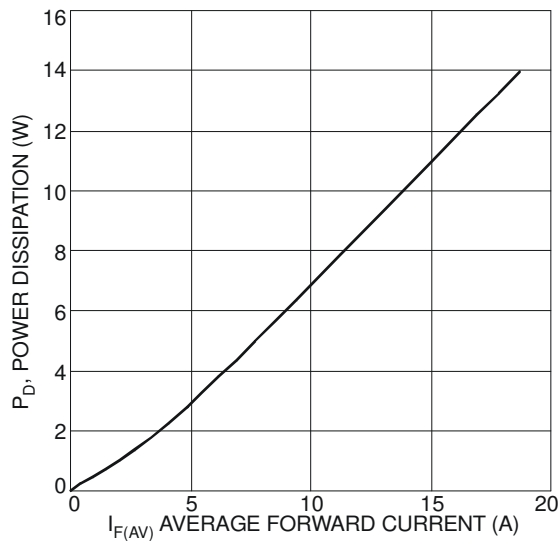


Fig. 1 Forward Power Dissipation

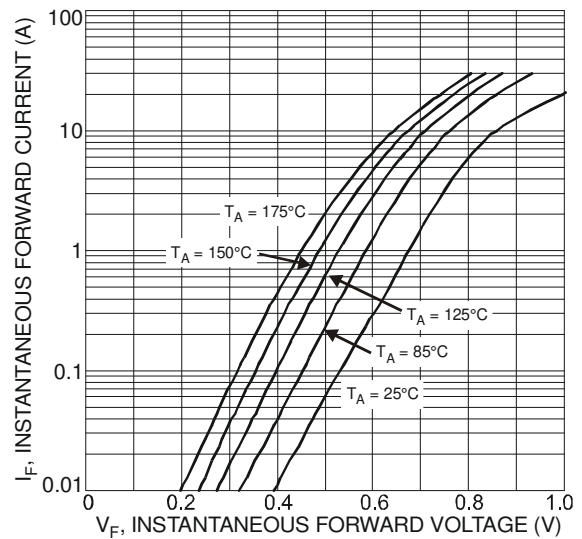


Fig. 2 Typical Forward Characteristics

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SBR20200

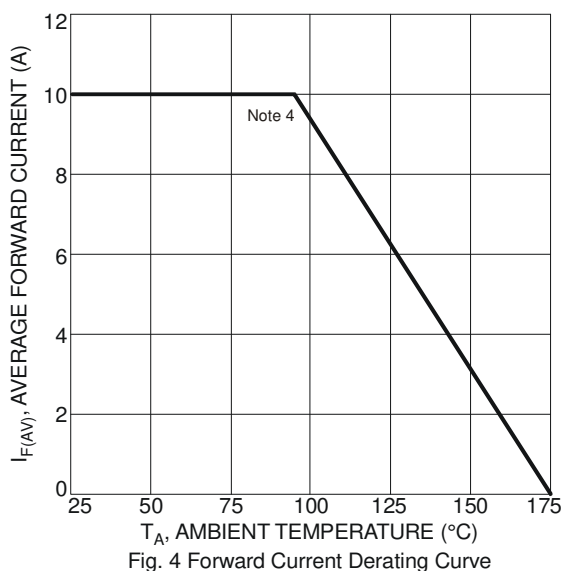
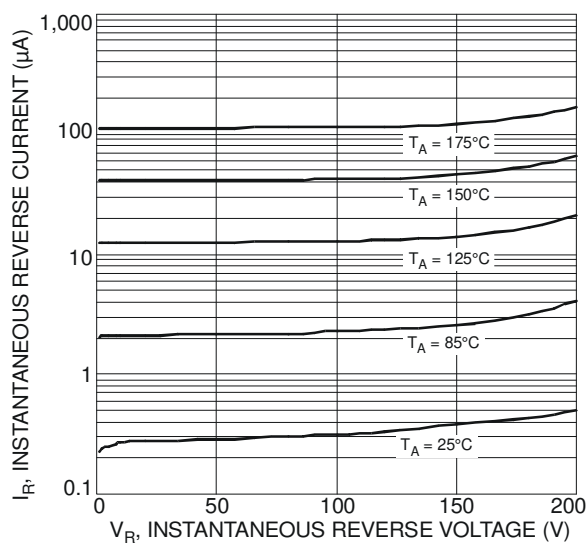
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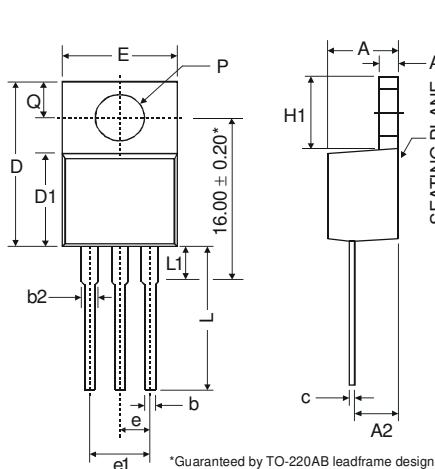
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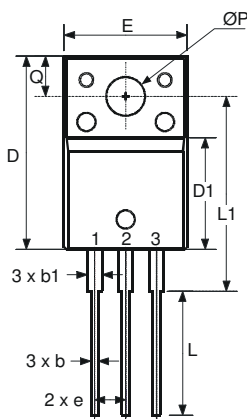


## Package Outline Dimensions



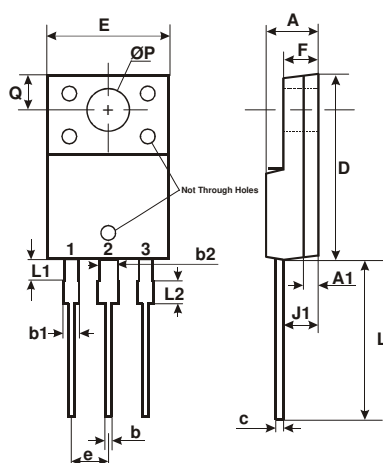
Dim	Min	Typ	Max
A	3.56	-	4.82
A1	0.51	-	1.39
A2	2.04	-	2.92
b	0.39	0.81	1.01
b2	1.15	1.24	1.77
c	0.356	-	0.61
D	14.22	-	16.51
D1	8.39	-	9.01
e	2.54		
e1	5.08		
E	9.66	-	10.66
H1	5.85	-	6.85
L	12.70	-	14.73
L1	-	-	6.35
P	3.54	-	4.08
Q	2.54	-	3.42

All Dimensions in mm



Dim	Min	Typ	Max
A	4.50	4.70	4.90
A1	3.04	3.24	3.44
A2	2.56	2.76	2.96
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
c	0.50	0.60	0.70
D	15.67	15.87	16.07
D1	8.99	9.19	9.39
e	2.54		
E	9.91	10.11	10.31
L	9.45	9.75	10.05
L1	15.80	16.00	16.20
P	2.98	3.18	3.38
Q	3.10	3.30	3.50

All Dimensions in mm



DIM.	MIN.	MAX.
A	4.30	4.70
A1	1.3	
b	0.50	0.75
b1	1.10	1.35
b2	1.50	1.75
c	0.50	0.75
D	14.80	15.20
E	9.96	10.36
e	2.54 typ	
F	2.80	3.20
J1	2.50	2.90
L	12.80	13.60
L1	1.70	1.90
L2	1.90	2.10
ØP	3.50 typ	
Q	2.70 typ	

All Dimensions in mm

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SBR20200

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