



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.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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20A SBR® Super Barrier Rectifier

Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- 200°C Operating Junction Temperature
- Super Barrier Design
- Soft, Fast Switching Capability
- Molded Plastic TO-220AB, and ITO-220AB Packages
- **Lead Free Finish, RoHS Compliant (Note 2)**

Mechanical Data

- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 **(e3)**
- Marking: See Page 3
- Ordering Information: See Page 3

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	150	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{RM}		
RMS Reverse Voltage	$V_{R(RMS)}$	106	V
Average Rectified Output Current @ $T_C = 175^\circ\text{C}$	I_O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	180	A
Peak Repetitive Reverse Surge Current (2 μs -1Khz)	I_{RRM}	3	A
Maximum Thermal Resistance (per leg)	$R_{\theta JC}$	2	$^\circ\text{C/W}$
Package = TO-220AB		4	
Package = ITO-220AB			
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +200	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	150	-	-	V	$I_R = 12 \mu\text{A}$
Forward Voltage Drop	V_F	-	0.69	0.88 0.73 1.00	V	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$ $I_F = 10\text{A}, T_J = 125^\circ\text{C}$ $I_F = 20\text{A}, T_J = 25^\circ\text{C}$
Leakage Current (Note 1)	I_R	-	-	12 3	μA mA	$V_R = 150\text{V}, T_J = 25^\circ\text{C}$ $V_R = 150\text{V}, T_J = 125^\circ\text{C}$

Notes:

1. Short duration pulse test used to minimize self-heating effect.
2. RoHS revision 13.2.2003. High temperature solder exemption applied, see *EU Directive Annex Note 7*.

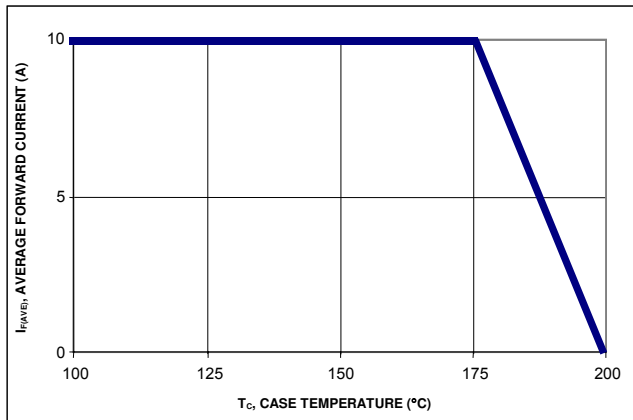


Figure 1: Current Derating Curve, Per Element

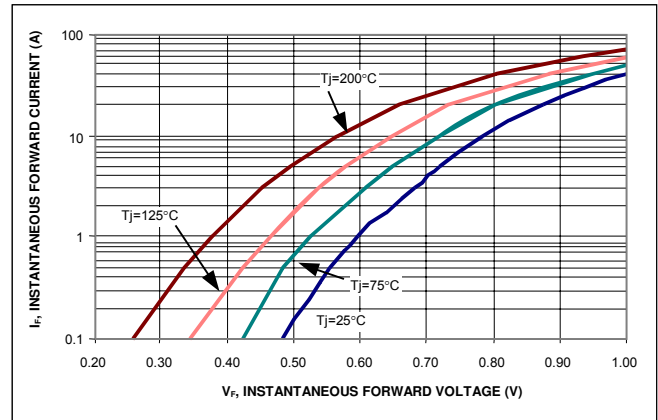


Figure 2: Typical Forward Characteristics, Per Element

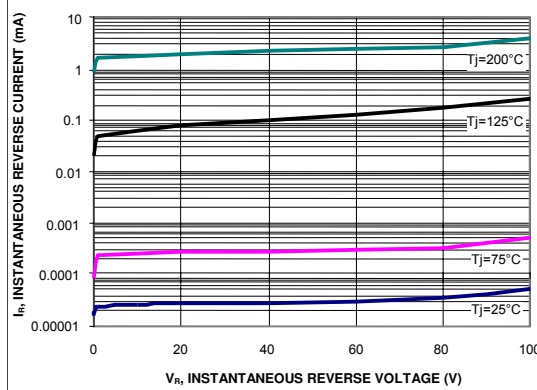
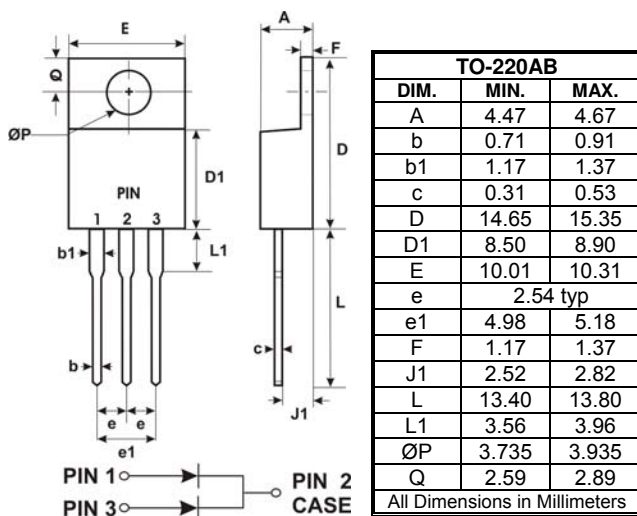


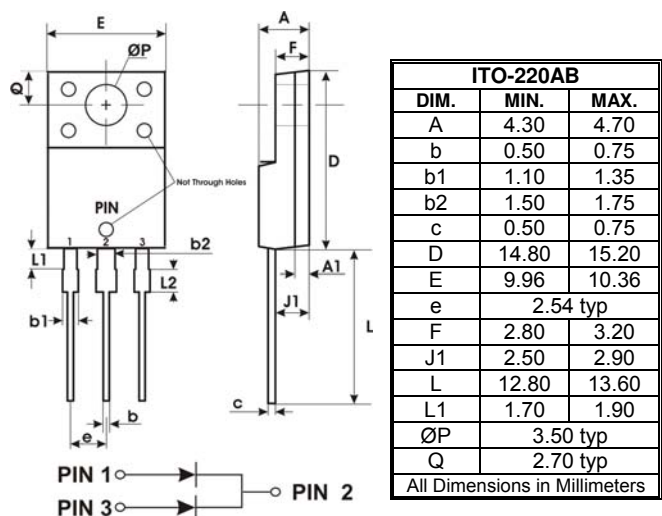
Figure 3: Typical Reverse Characteristics, Per Element

Package Outline Drawings



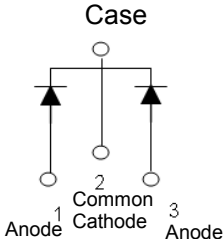
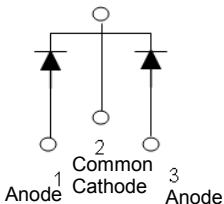
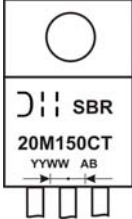
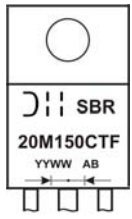
TO-220AB



ITO-220AB



Marking, Polarity, Weight & Ordering Information

	SBR20M150CT	SBR20M150CTF
Case Style	 TO-220AB	 ITO-220AB
Polarity	Case 	
Marking		
Weight	2.1g	1.9g

Ordering Information	SBR20M150CT 50 pieces/tube	SBR20M150CTF 50 pieces/tube
Date Code	YY = Last two digits of year, ex = 06 = 2006 WW = Week (01-52)	
Other Marking Information	A = Foundry Code B = Assembly Code	

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