

20A SBR[®]
Super Barrier Rectifier

NEW PRODUCT

Features **Mechanical Data**

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| <ul style="list-style-type: none"> • Low Forward Voltage Drop • Excellent High Temperature Stability • Super Barrier Design • Soft, Fast Switching Capability • Molded Plastic TO-220AB, and ITO-220AB packages • Lead Free Finish, RoHS Compliant (Note 2) | <ul style="list-style-type: none"> • 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 |
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Maximum Ratings @ T_A = 25°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}	40	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
RMS Reverse Voltage	V _{R(RMS)}	28	V
Average Rectified Output Current @ T _C = 110°C	I _O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	200	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	3	A
Maximum Thermal Resistance (per leg)	R _{θJC}	2	°C/W
Package = TO-220AB			
Package = ITO-220AB		4	
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	40	-	-	V	I _R = 0.5 mA
Forward Voltage Drop	V _F	-	-	0.47	V	I _F = 10A, T _J = 25°C
			0.41	0.44		I _F = 10A, T _J = 125°C
			-	0.60		I _F = 20A, T _J = 25°C
Leakage Current (Note 1)	I _R	-	-	0.5	mA	V _R = 40V, T _J = 25 °C
				100		V _R = 40V, T _J = 125 °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*.

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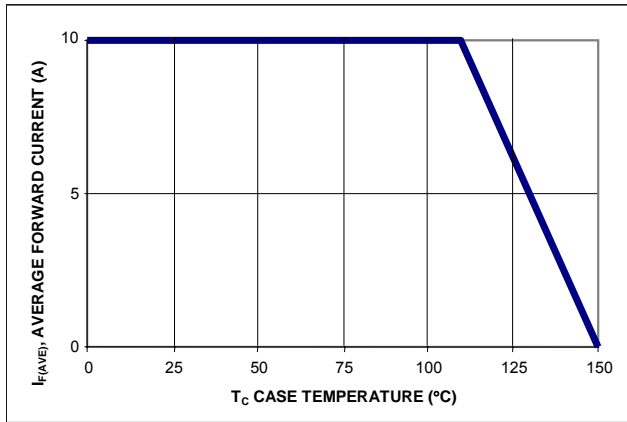


Figure 1: Current Derating Curve, Per Element

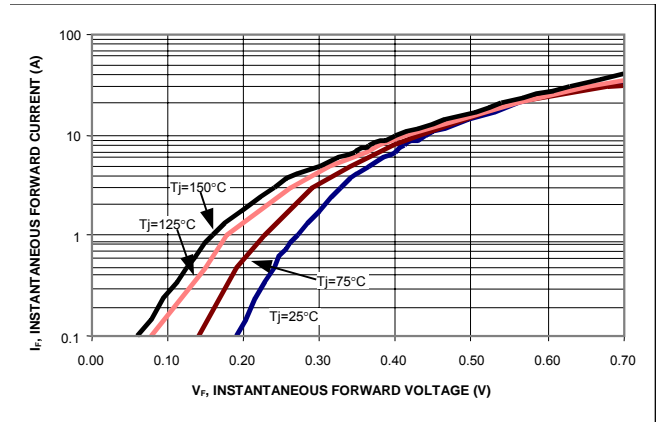


Figure 2: Typical Forward Characteristics, Per Element

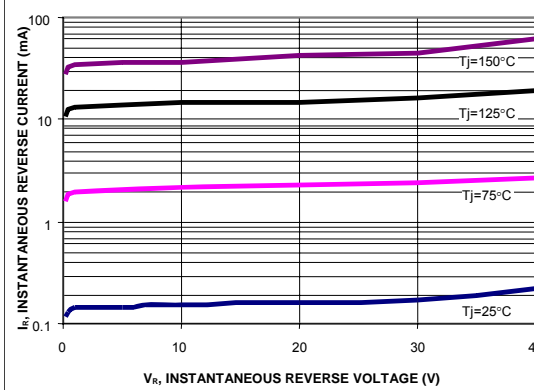
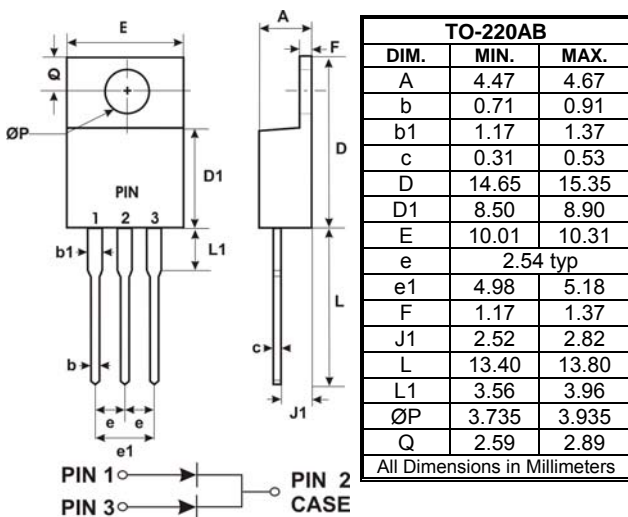


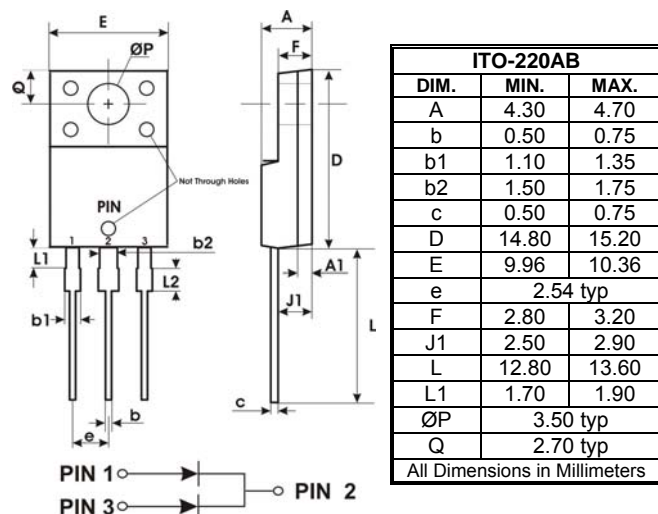
Figure 3: Typical Reverse Characteristics, Per Element

Package Outline Drawings

TO-220AB

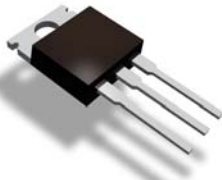

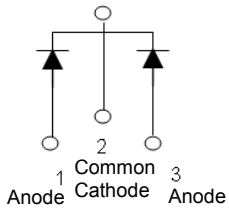
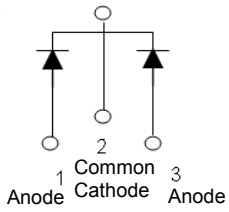




ITO-220AB



NEW PRODUCT

Marking, Polarity, Weight & Ordering Information

	SBR20U40CT	SBR20U40CTFP
Case Style	 TO-220AB	 ITO-220AB
Polarity	<p>Case</p> 	
Marking		
Weight	2.1g	1.9g

Ordering Information	SBR20U40CT 50 pieces/tube	SBR20U40CTFP 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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