

10A SBR[®]
Super Barrier Rectifier

NEW PRODUCT

Features

- 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)**

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°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}	60	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
RMS Reverse Voltage	V _{R(RMS)}	42	V
Average Rectified Output Current @ T _C = 110°C	I _O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	150	A
Peak Repetitive Reverse Surge Current (2µS-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}	60	-	-	V	I _R = 0.5 mA
Forward Voltage Drop	V _F	-	-	0.48	V	I _F = 5A, T _J = 25°C
			0.39	0.42		I _F = 5A, T _J = 125°C
			-	0.62		I _F = 10A, T _J = 25°C
Leakage Current (Note 1)	I _R	-	-	0.5	mA	V _R = 60V, T _J = 25 °C
				100		V _R = 60V, 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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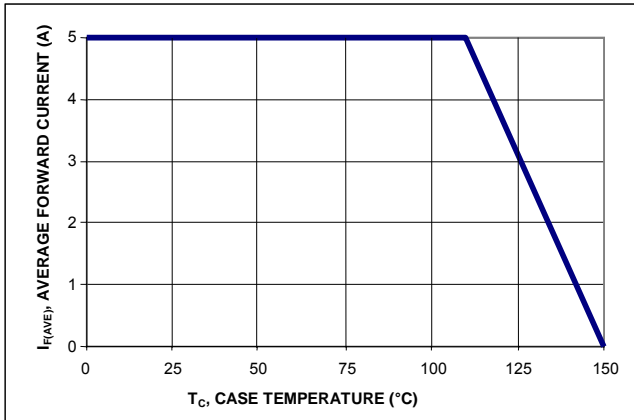


Figure 1: Current Derating Curve, Per Element

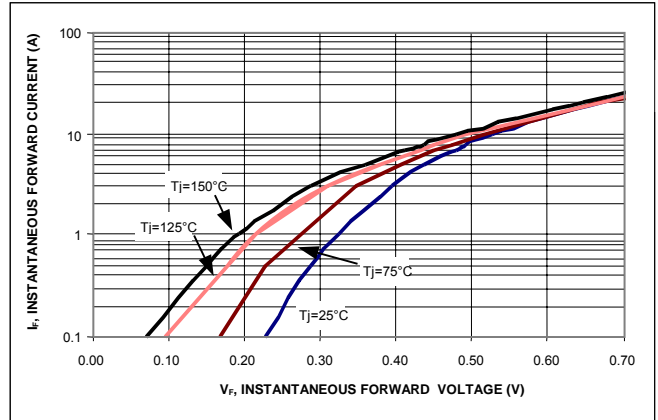


Figure 2: Typical Forward Characteristics, Per Element

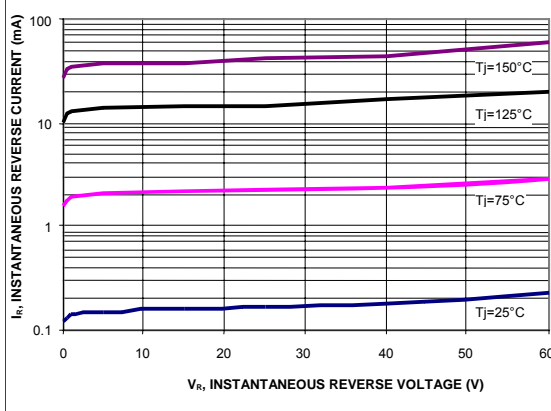
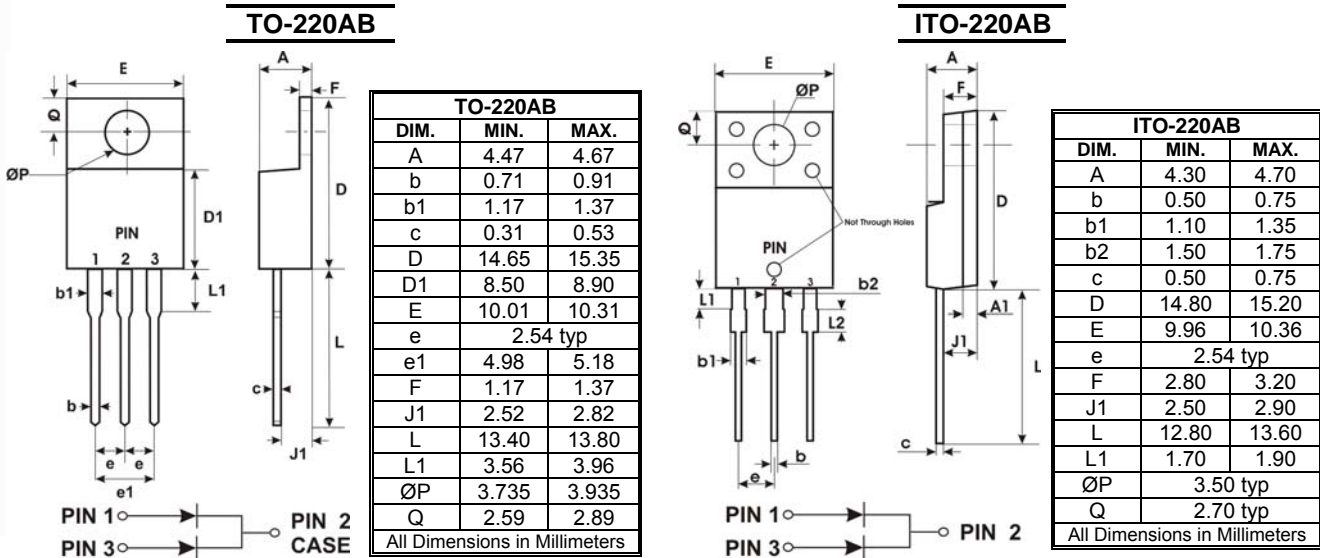


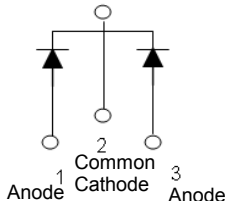
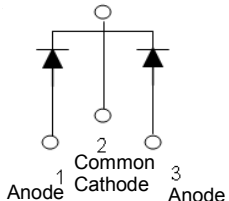
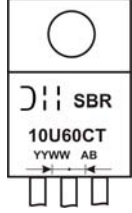
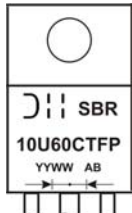


Figure 3: Typical Reverse Characteristics, Per Element

Package Outline Drawings



Marking, Polarity, Weight & Ordering Information

	SBR10U60CT	SBR10U60CTFP
Case Style	 TO-220AB	 ITO-220AB
Polarity	<p>Case</p> 	
Marking		
Weight	2.1g	1.9g

Ordering Information	SBR10U60CT 50 pieces/tube	SBR10U60CTFP 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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