

**40A SBR®
Super Barrier Rectifier**
NEW PRODUCT
Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Super Barrier Design
- Soft, Fast Switching Capability
- **Lead Free Finish, RoHS Compliant (Note 2)**

Mechanical Data

- Package: TO-220AB
- 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	40	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	300	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	3	A
Maximum Thermal Resistance (per leg)	R _{θJC}	2	°C/W
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	0.69 0.60	V	I _F = 20A, T _J = 25°C I _F = 20A, T _J = 125°C
Leakage Current (Note 1)	I _R	-	-	0.5 100	mA	V _R = 60V, T _J = 25 °C 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*.

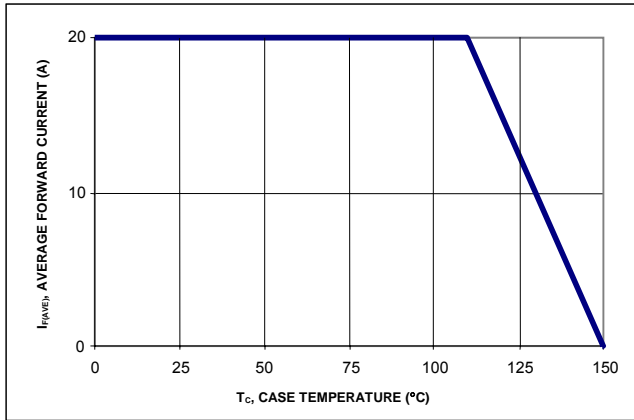


Figure 1: Current Derating Curve, Per Element

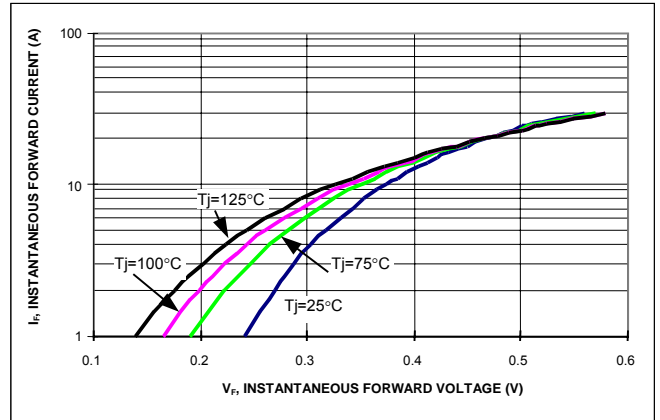


Figure 2: Typical Forward Characteristics, Per Element

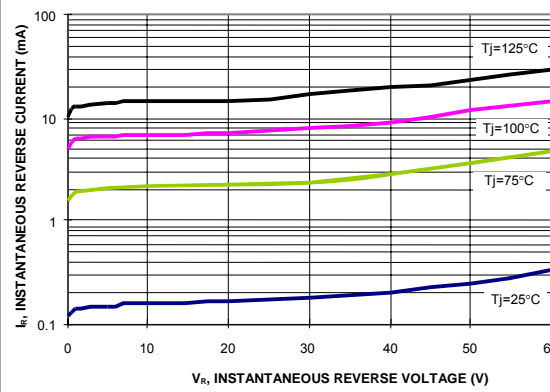
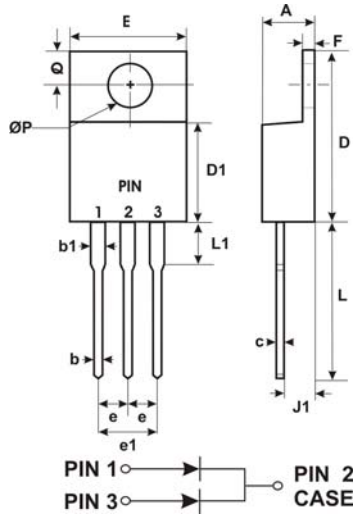


Figure 3: Typical Reverse Characteristics, Per Element

Package Outline Drawing

TO-220AB



TO-220AB		
DIM.	MIN.	MAX.
A	4.47	4.67
b	0.71	0.91
b1	1.17	1.37
c	0.31	0.53
D	14.65	15.35
D1	8.50	8.90
E	10.01	10.31
e	2.54 typ	
e1	4.98	5.18
F	1.17	1.37
J1	2.52	2.82
L	13.40	13.80
L1	3.56	3.96
ØP	3.735	3.935
Q	2.59	2.89
All Dimensions in Millimeters		

Marking, Polarity, Weight & Ordering Information

	Case Style	Polarity Case	Marking	Weight
SBR40U60CT	 TO-220AB			2.1g

Ordering Information	Date Code	Other Marking Information
SBR40U60CT 50 pieces/tube	YY = Last two digits of year, ex = 06 = 2006 WW = Week (01-52)	A = Foundry Code B = Assembly Code

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