

**30A SBR<sup>®</sup>**  
**Super Barrier Rectifier**

NEW PRODUCT

**Features** **Mechanical Data**

- 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)**
- 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<sub>A</sub> = 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 <sub>RRM</sub>	300	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	212	V
Average Rectified Output Current @ T <sub>C</sub> = 150°C	I <sub>O</sub>	30	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	200	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I <sub>RRM</sub>	2	A
Maximum Thermal Resistance (per leg)	R <sub>θJC</sub>	2	°C/W
Package = TO-220AB			
Package = ITO-220AB		4	
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	300	-	-	V	I <sub>R</sub> = 0.1 mA
Forward Voltage Drop	V <sub>F</sub>	-	0.76	1.03	V	I <sub>F</sub> = 15A, T <sub>J</sub> = 25°C I <sub>F</sub> = 15A, T <sub>J</sub> = 125°C
Leakage Current (Note 1)	I <sub>R</sub>	-	-	0.1 10	mA	V <sub>R</sub> = 300V, T <sub>J</sub> = 25 °C V <sub>R</sub> = 300V, T <sub>J</sub> = 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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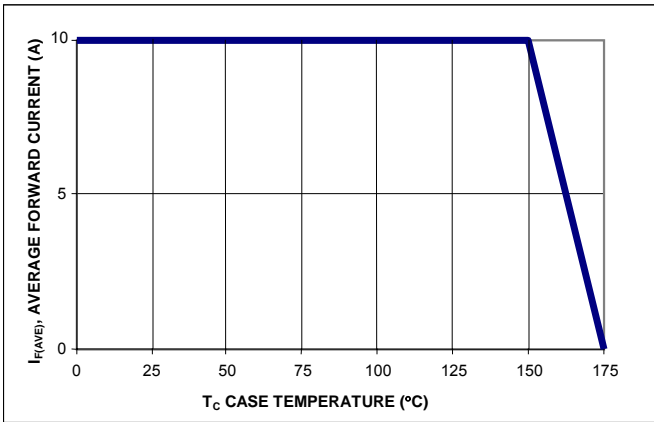


Figure 1: Current Derating Curve, Per Element

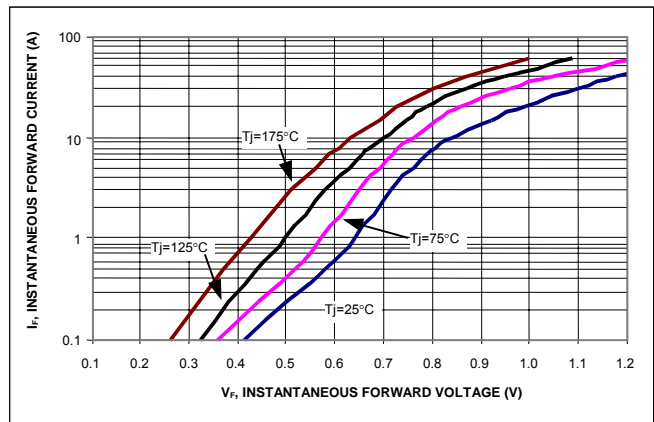


Figure 2: Typical Forward Characteristics, Per Element

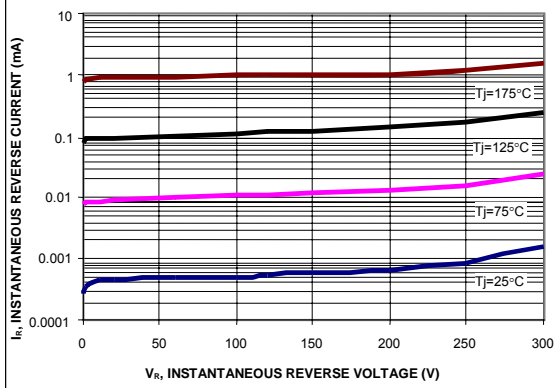
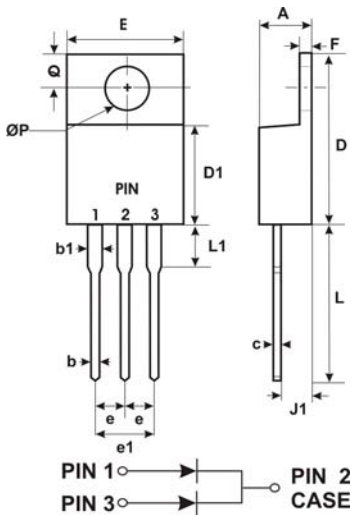


Figure 3: Typical Reverse Characteristics, Per Element

**Package Outline Drawings**

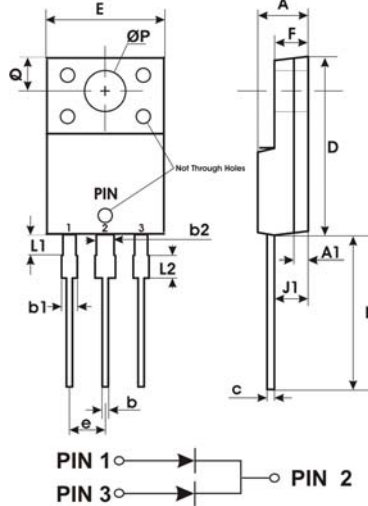
**TO-220AB**



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

**ITO-220AB**



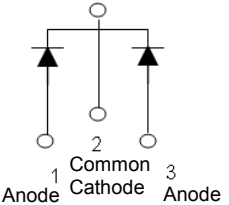
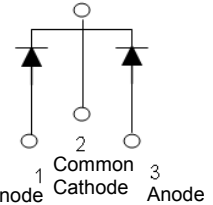




ITO-220AB		
DIM.	MIN.	MAX.
A	4.30	4.70
b	0.50	0.75
b1	1.10	1.35
b2	1.50	1.75
c	0.50	0.75
D	14.80	15.20
E	9.96	10.36
e	2.54 typ	
F	2.80	3.20
J1	2.50	2.90
L	12.80	13.60
L1	1.70	1.90
ØP	3.50 typ	
Q	2.70 typ	

All Dimensions in Millimeters

NEW PRODUCT

**Marking, Polarity, Weight & Ordering Information**

	<b>SBR30300CT</b>	<b>SBR30300CTFP</b>
Case Style	 <b>TO-220AB</b>	 <b>ITO-220AB</b>
Polarity	<p>Case</p> 	
Marking		
Weight	<b>2.1g</b>	<b>1.9g</b>

Ordering Information	<b>SBR30300CT</b> 50 pieces/tube	<b>SBR30300CTFP</b> 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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