

## Product Summary (@ $T_A = +25^\circ\text{C}$ , Per Leg)

$V_{RRM}$ (V)	$I_o$ (A)	$V_F(\text{MAX})$ (mV)	$I_R(\text{MAX})$ (mA)
60	10	700	0.5

## Features and Benefits

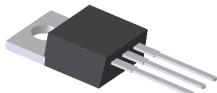
- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- UL Approval in Accordance with UL 1557, Reference No. E94661
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)

## Applications

- SMPS
- Freewheeling Rectifiers
- DC-DC Converter

## Mechanical Data

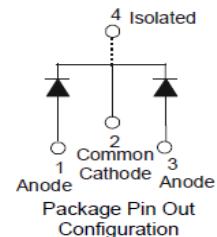
- Case: ITO-220S
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish Annealed Over Copper Lead frame. Solderable per MIL-STD-202, Method 208 (E3)
- Weight: 1.335 grams (approximate)



Top View



Bottom View



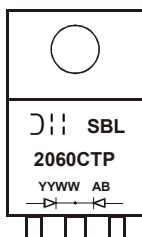
## Ordering Information (Note 3)

Part Number	Case	Packaging
SBL2060CTP	ITO-220S	50 pieces/tube

Notes:

1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>

## Marking Information



SBL2060CTP = Product Type Marking Code  
 AB = Foundry and Assembly Code  
 YYWW = Date Code Marking  
 YY = Last two digits of year (ex: 14 = 2014)  
 WW = Week (01 - 53)

## Maximum Ratings (Per Leg) (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	60	V
DC Blocking Voltage	$V_{RM}$		
Average Rectified Output Current (Per Leg) (Total)	$I_O$	10 20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	130	A
Isolation Voltage From Terminal Heatsink $t = 1$ min.	$V_{AC}$	2000	V

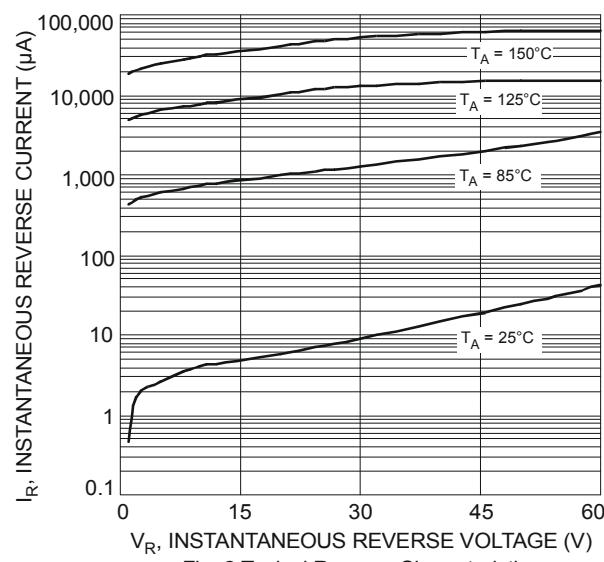
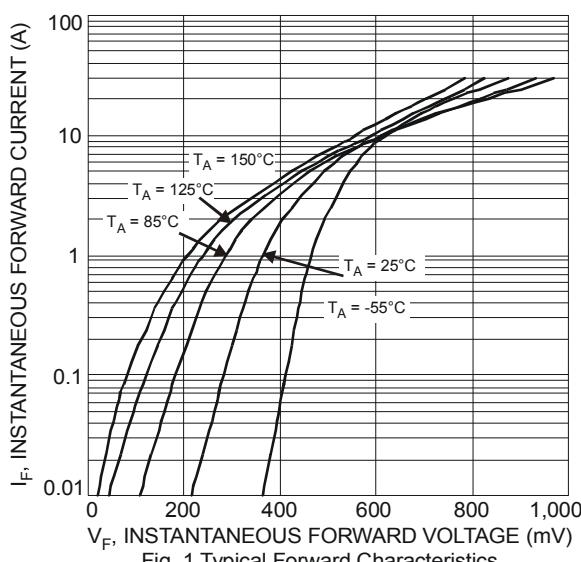
## Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 5)	$R_{\theta JC}$	3	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

## Electrical Characteristics (Per Leg) (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	$V_F$	—	0.61 0.59	0.70 0.65	V	$I_F = 10\text{A}, T_J = +25^\circ\text{C}$ $I_F = 10\text{A}, T_J = +125^\circ\text{C}$
Leakage Current (Note 4)	$I_R$	—	0.04	0.5 50	mA	$V_R = 60\text{V}, T_J = +25^\circ\text{C}$ $V_R = 60\text{V}, T_J = +100^\circ\text{C}$

Notes: 4. Short duration pulse test used to minimize self-heating effect.  
5. Device mounted on heatsink (Black Aluminum, 45mm\*20mm\*12mm)



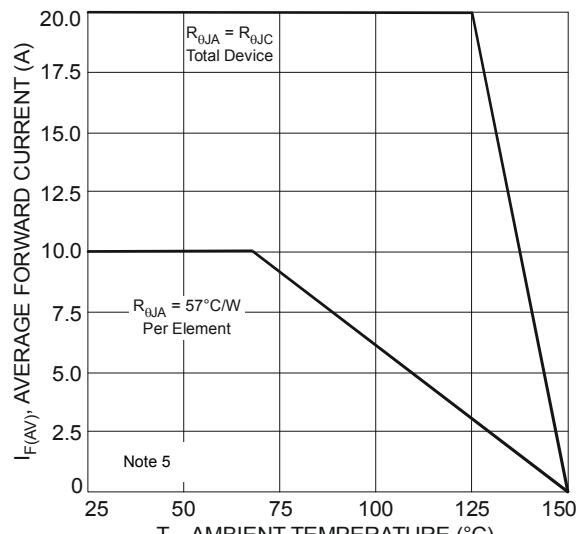
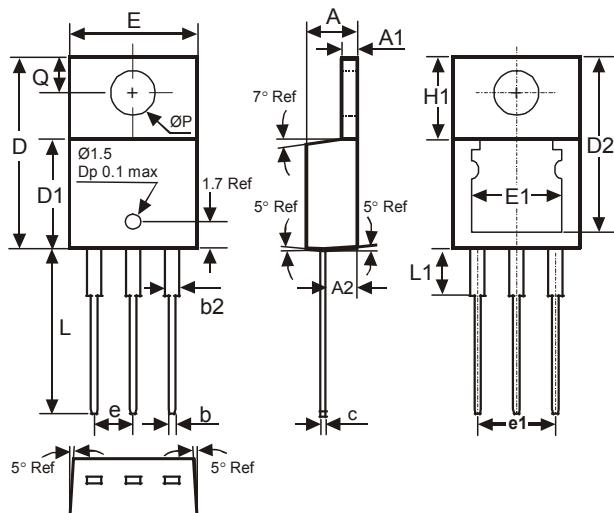


Fig. 3 Forward Current Derating Curve

## Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



ITO-220S			
Dim	Min	Max	Typ
<b>A</b>	4.52	4.62	4.57
<b>A1</b>	1.17	1.39	—
<b>A2</b>	2.57	2.77	2.67
<b>b</b>	0.72	0.95	0.84
<b>b2</b>	1.15	1.34	1.26
<b>c</b>	0.356	0.61	—
<b>D</b>	14.22	16.51	15.00
<b>D1</b>	8.60	8.80	8.70
<b>D2</b>	13.68	14.08	—
<b>e</b>	2.49	2.59	2.54
<b>e1</b>	4.98	5.18	5.08
<b>E</b>	10.01	10.21	10.11
<b>E1</b>	6.86	8.89	—
<b>H1</b>	5.85	6.85	—
<b>L</b>	13.30	13.90	13.60
<b>L1</b>	—	4.00	—
<b>P</b>	3.54	4.08	—
<b>Q</b>	2.54	3.42	—

All Dimensions in mm

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