



**THE DATASHEET OF  
SBL1040CTP**

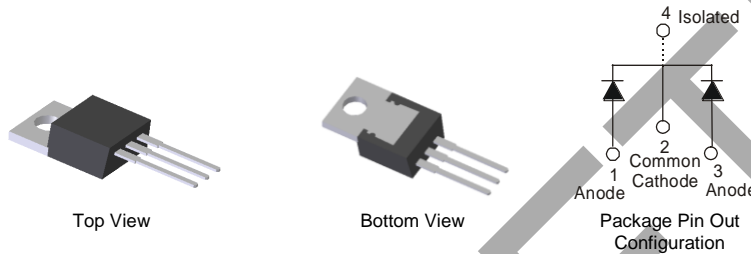


### Features

- Low Forward Voltage Drop
- Soft, Fast Switching Capability
- Schottky Barrier Chip
- ITO-220S Heat Sink Tab Electrically Isolated from Cathode
- UL Approval in Accordance with UL 1557, Reference No. E94661

### Mechanical Data

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



### Ordering Information (Notes 1 & 2)

Part Number	Case	Packaging
SBL1040CTP	ITO-220S	50 pieces/tube
SBL1040CTP-G	ITO-220S	50 pieces/tube

- Notes:
1. For packaging details, go to our website at <http://www.diodes.com>.
  2. For Green Molding compound version part number, add "-G" suffix to part number. Example: SBL1040CTP-G.

### Marking Information



SBL1040CTP = Product Type Marking Code  
 AB = Foundry and Assembly Code  
 YYWW = Date Code Marking  
 YY = Last two digits of year (ex: 08 = 2008)  
 WW = Week (01 - 53)

OBSELETE – PART DISCONTINUED

**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	$V_{RRM}$	40	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_{RM}$		
Average Rectified Output Current	(Per Leg)	5	A
	(Total)	10	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	110	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	$R_{\theta JC}$	3	$^\circ\text{C/W}$
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	$V_F$	-	-	0.56	V	$I_F = 5\text{A}, T_J = 25^\circ\text{C}$
Leakage Current (Note 3)	$I_R$	-	-	0.5	mA	$V_R = 40\text{V}, T_J = 25^\circ\text{C}$
		-	-	50		$V_R = 40\text{V}, T_J = 100^\circ\text{C}$

Notes: 3. Short duration pulse test used to minimize self-heating effect.

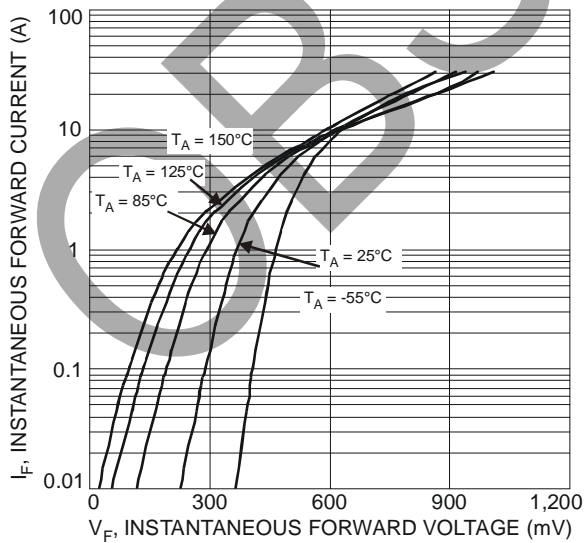


Fig. 1 Typical Forward Characteristics

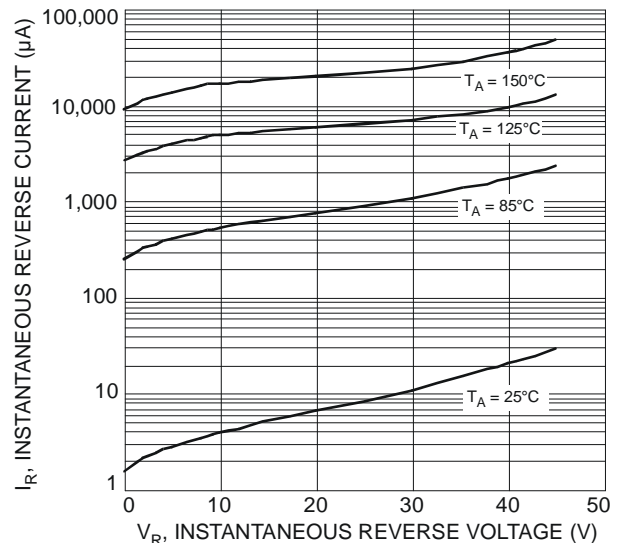


Fig. 2 Typical Reverse Characteristics

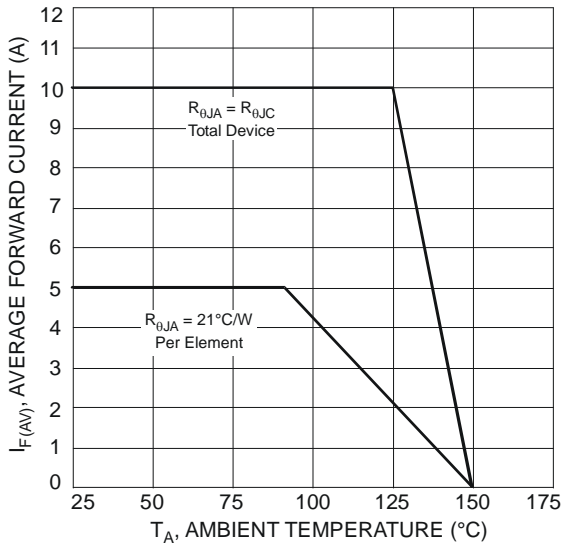
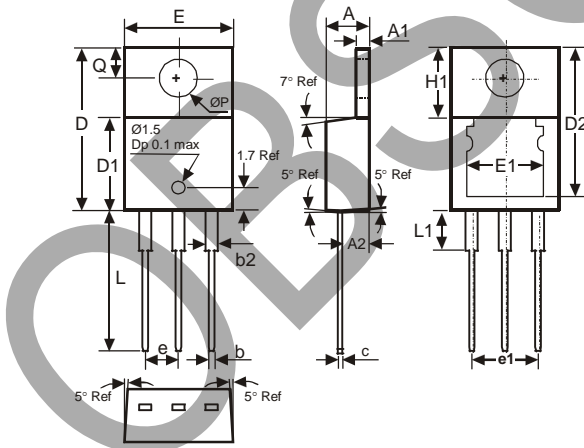


Fig. 3 Forward Current Derating Curve

**Package Outline Dimensions**



ITO-220S			
DIM.	MIN.	MAX.	TYP.
A	4.52	4.62	4.57
A1	0.51	1.39	-
A2	2.57	2.77	2.67
b	0.72	0.95	0.84
b2	1.15	1.54	1.26
c	0.356	0.61	-
D	14.22	16.51	15.00
D1	8.60	8.80	8.70
D2	13.68	14.08	-
e	2.49	2.59	2.54
e1	4.98	5.18	5.08
E	10.01	10.21	10.11
E1	6.86	8.89	-
H1	5.85	6.85	-
L	13.30	13.90	13.60
L1	-	4.00	-
P	3.54	4.08	-
Q	2.54	3.42	-
All Dimensions in mm			

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