PART OBSOLETE – NO ALTERNATE PART

SBL30L30CT

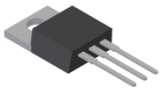
30A DUAL LOW V_F SCHOTTKY BARRIER RECTIFIER

Features

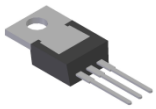
- Low Power Loss, High Efficiency
- Guard Ring for Transient Protection
- High Surge Capability
- Very Low Forward Voltage Drop
- For Use in High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- **Lead Free Finish, RoHS Compliant (Note 1)**

Mechanical Data

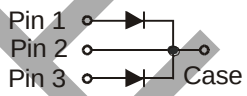
- Case: TO-220AB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Tin Finish. Solderable per MIL-STD-202, Method 208 e3
- Polarity: See Diagram
- Marking: Type Number
- Ordering Information: See Page 3
- Weight: 2.24 grams (approximate)



Top View



Bottom View



Pin Configuration

Maximum Ratings @T_A = 25°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 Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current @ T_C = 140°C Total Device Per Element	I_O	30 15	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load Per Element	I_{FSM}	260	A
Peak Repetitive Reverse Current Per Element at t_P = 2μs, 1 KHz	I_{RRM}	1.0	A
Voltage Rate of Change	dV/dt	10,000	V/μs

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case Per Diode (Note 2) Total	$R_{\theta JC}$	1.5 0.8	°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 3)	$V_{(BR)R}$	30	—	—	V	I_R = 1.5mA
Forward Voltage Per Element	V_F	— — — —	— 0.38 0.52 —	0.48 — 0.57 0.50	V	I_F = 15A, T_J = 25°C I_F = 15A, T_J = 125°C I_F = 30A, T_J = 25°C I_F = 30A, T_J = 125°C
Peak Reverse Current Per Element (Note 3)	I_R	— —	— —	1.0 300	mA mA	V_R = 30V, T_J = 25°C V_R = 30V, T_J = 125°C

Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/quality/lead_free.html.
2. Thermal resistance junction to case: device mounted on 200x200x5mm aluminum plate.
3. Short duration pulse test used to minimize self-heating effect.

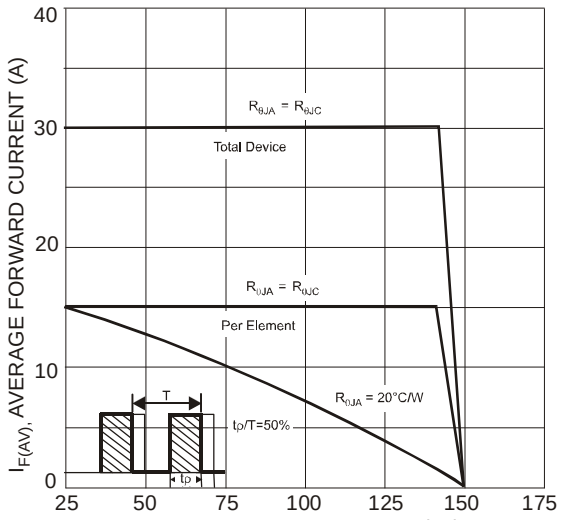


Fig. 1 Forward Current Derating Curve

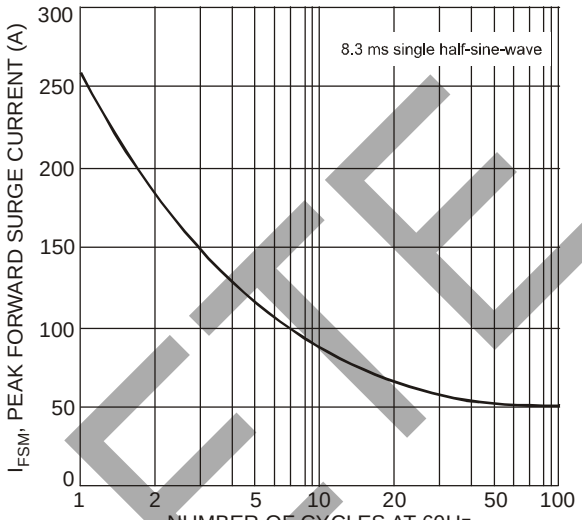


Fig. 2 Maximum Non-Repetitive Surge Current, Per Element

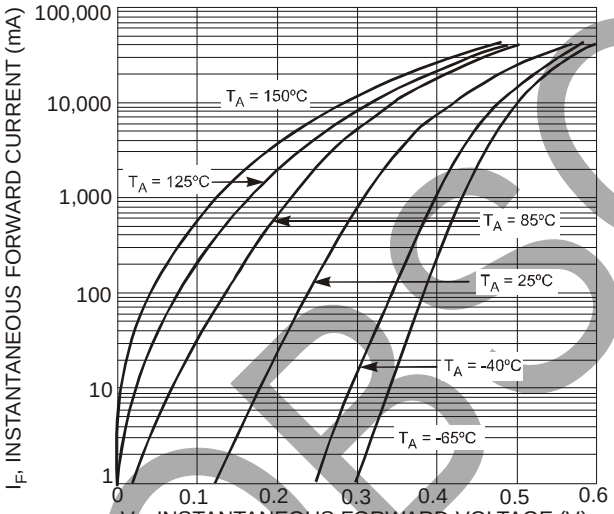


Fig. 3 Typical Forward Characteristics, Per Element

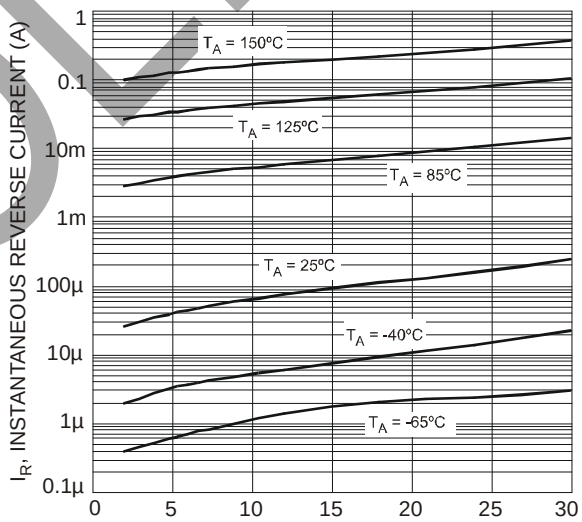


Fig. 4 Typical Reverse Characteristics, Per Element

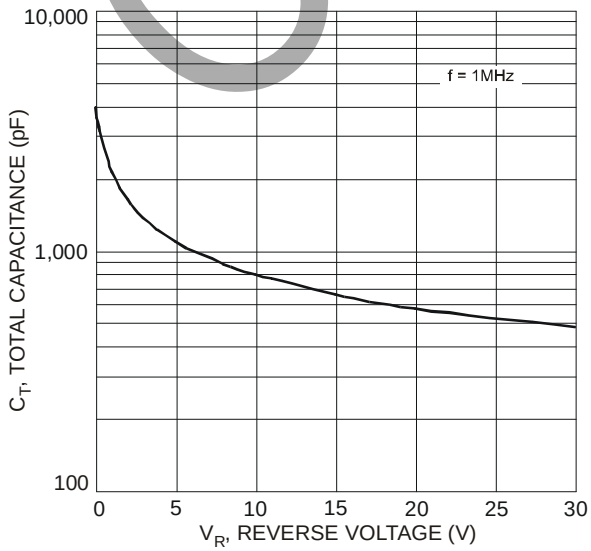


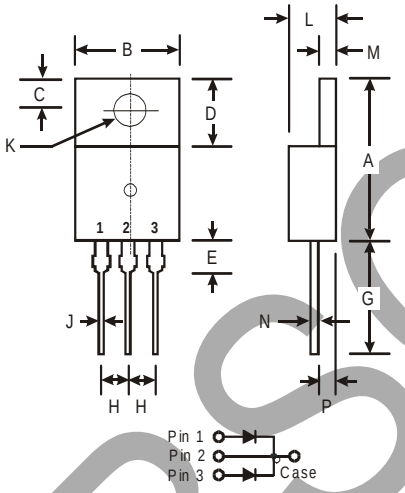
Fig. 5 Typical Total Capacitance, Per Element

Ordering Information (Note 4)

Part Number	Case	Packaging
SBL30L30CT	TO-220AB	50/Tube

Notes: 4. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Package Outline Dimensions



TO-220AB		
Dim	**Min**	**Max**
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
H	2.29	2.79
J	0.51	1.14
K	3.53∅	4.09∅
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
All Dimensions in mm		

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