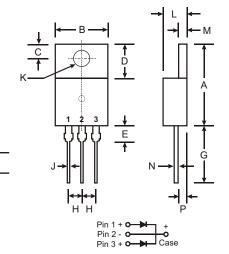


SBL2030CT - SBL2060CT

20A SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0



TO-220AB Dim Min Max 14.22 15.88 Α В 9.65 10.67 С 2.54 3.43 D 5.84 6.86 6.35 Ε G 12.70 14.73 н 2.29 2.79 J 0.51 1.14 Κ 3.53Ø 4.09Ø L 3.56 4.83 М 1.14 1.40 N 0.30 0.64 Р 2.03 2.92 All Dimensions in mm

Mechanical Data

Case: Molded Plastic

 Terminals: Plated Leads Solderable per MIL-STD-202, Method 208

Polarity: As Marked on Body

Weight: 2.24 grams (approx.)

Mounting Position: AnyMarking: Type Number

wanting. Type ramber

Maximum Ratings and Electrical Characteristics @ TA = 25°C unless otherwise specified

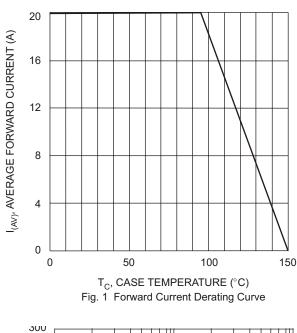
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	SBL 2030CT	SBL 2035CT	SBL 2040CT	SBL 2045CT	SBL 2050CT	SBL 2060CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	35	40	45	50	60	V
RMS Reverse Voltage	V _{R(RMS)}	21	24.5	28	31.5	35	42	V
Average Rectified Output Current (Note 1) @ T _C = 95°C	Io	20						Α
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	250						А
Forward Voltage Drop @ I _F = 10A, T _C = 25°C	V _{FM}	0.55 0.75				V		
Peak Reverse Current $@T_C = 25^{\circ}C$ at Rated DC Blocking Voltage $@T_C = 100^{\circ}C$		1.0 50						mA
Typical Junction Capacitance (Note 2)	Cj	650					pF	
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	2.8					°C/W	
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150						°C

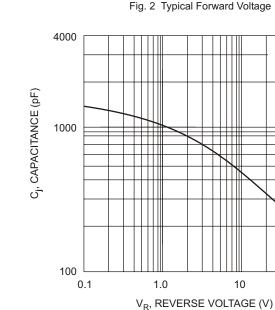
Notes: 1. Thermal resistance junction to case mounted on heatsink.

2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.









40

10

1.0

0.1

0.1

0.3

0.5

0.7

10

Fig. 4 Typical Junction Capacitance

V_F, INSTANTANEOUS FORWARD VOLTAGE (V)

SBL2030CT - SBL2045CT

SBL2045CT - SBL2060CT

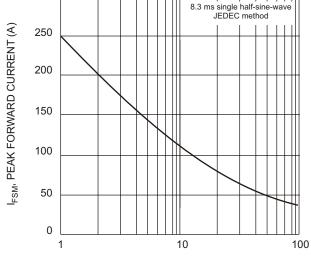
 $T_J = 25^{\circ}C$ Pulse width = 300μs 2% duty cycle

0.9

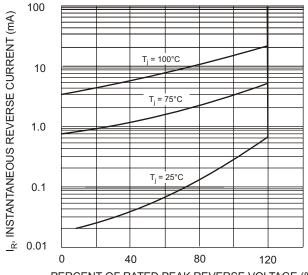
T_j = 25°C

100

I_F, INSTANTANEOUS FORWARD CURRENT (A)



NUMBER OF CYCLES AT 60Hz Fig. 3 Maximum Non-Repetitive Surge Current



PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 5 Typical Reverse Characteristics