



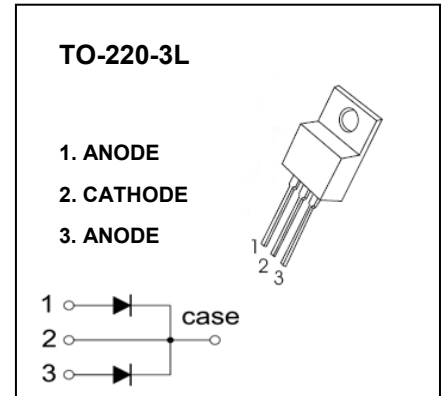
## TO-220-3L Plastic-Encapsulate Diodes

### SBL1030CT, 35CT, 40CT, 45CT, 50CT, 60CT

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



#### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted )

Symbol	Parameter	Value						Unit
		SBL 1030CT	SBL 1035CT	SBL 1040CT	SBL 1045CT	SBL 1050CT	SBL 1060CT	
$V_{RRM}$	Peak repetitive reverse voltage	30	35	40	45	50	60	V
$V_{RWM}$	Working peak reverse voltage							
$V_R$	DC blocking voltage							
$V_{R(RMS)}$	RMS reverse voltage	21	24.5	28	31.5	35	42	V
$I_O$	Average rectified output current@ $T_c=95^\circ\text{C}$	10						A
$I_{FSM}$	Non-Repetitive peak forward surge current 8.3ms half sine wave	175						A
$P_D$	Power dissipation	2						W
$R_{\theta JA}$	Thermal resistance from junction to ambient	50						$^\circ\text{C}/\text{W}$
$T_j$	Junction temperature	125						$^\circ\text{C}$
$T_{stg}$	Storage temperature	-55~+150						$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Device	Test conditions	Min	Typ	Max	Unit
Reverse voltage	V <sub>(BR)</sub>	SBL1030CT	I <sub>R</sub> =0.5mA	30			V
		SBL1035CT		35			
		SBL1040CT		40			
		SBL1045CT		45			
		SBL1050CT		50			
		SBL1060CT		60			
Reverse current	I <sub>R</sub>	SBL1030CT	V <sub>R</sub> =30V			0.5	mA
		SBL1035CT	V <sub>R</sub> =35V				
		SBL1040CT	V <sub>R</sub> =40V				
		SBL1045CT	V <sub>R</sub> =45V				
		SBL1050CT	V <sub>R</sub> =50V				
		SBL1060CT	V <sub>R</sub> =60V				
Forward voltage	V <sub>F</sub>	SBL1030CT-1045CT	I <sub>F</sub> =5A			0.55	V
		SBL1050CT,1060CT				0.7	
Typical total capacitance	C <sub>tot</sub>	SBL1030CT-1060CT	V <sub>R</sub> =4V,f=1MHz		450		pF