

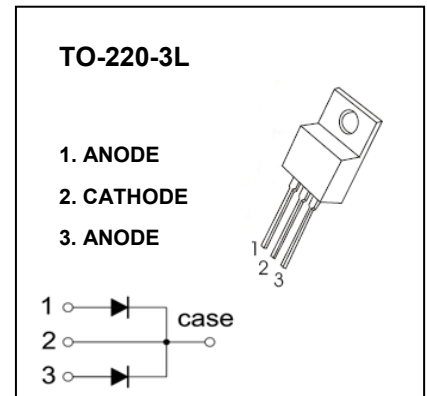
TO-220-3L Plastic-Encapsulate Diodes

SBL2030CT, 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 2030CT	SBL 2035CT	SBL 2040CT	SBL 2045CT	SBL 2050CT	SBL 2060CT	
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@ $T_c=95^\circ\text{C}$	20						A
I_{FSM}	Non-Repetitive peak forward surge current 8.3ms half sine wave	250						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 ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Device	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	SBL2030CT	$I_R=0.5\text{mA}$	30			V
		SBL2035CT		35			
		SBL2040CT		40			
		SBL2045CT		45			
		SBL2050CT		50			
		SBL2060CT		60			
Reverse current	I_R	SBL2030CT	$V_R=30\text{V}$			0.45	mA
		SBL2035CT	$V_R=35\text{V}$				
		SBL2040CT	$V_R=40\text{V}$				
		SBL2045CT	$V_R=45\text{V}$				
		SBL2050CT	$V_R=50\text{V}$				
		SBL2060CT	$V_R=60\text{V}$				
Forward voltage	V_F	SBL2030CT-2045CT	$I_F=10\text{A}$			0.55	V
		SBL2050CT,2060CT				0.7	
Typical total capacitance	C_{tot}	SBL2030CT-2060CT	$V_R=4\text{V},f=1\text{MHz}$		600		pF