

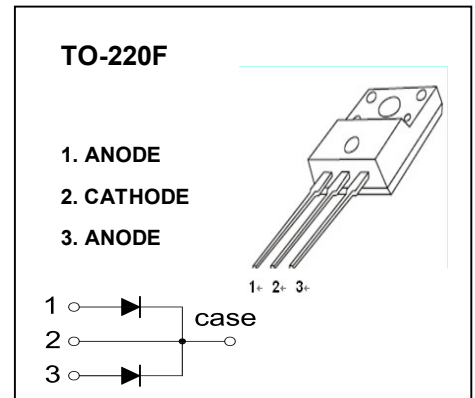
TO-220F Plastic-Encapsulate Diodes

SBL2030, 35, 40, 45, 50FCT

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
		SBL20 30FCT	SBL20 35FCT	SBL20 40FCT	SBL20 45FCT	SBL 20 50FCT	
V_{RRM}	Peak repetitive reverse voltage	30	35	40	45	50	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	V
I_O	Average rectified output current	20					A
I_{FSM}	Non-Repetitive peak forward surge current 8.3ms half sine wave	150					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	$V_{(BR)}$	SBL2030FCT	$I_R=0.5\text{mA}$	30			V
		SBL2035FCT		35			
		SBL2040FCT		40			
		SBL2045FCT		45			
		SBL2050FCT		50			
Reverse current	I_R	SBL2030FCT	$V_R=30\text{V}$			0.45	mA
		SBL2035FCT	$V_R=35\text{V}$				
		SBL2040FCT	$V_R=40\text{V}$				
		SBL2045FCT	$V_R=45\text{V}$				
		SBL2050FCT	$V_R=50\text{V}$				
Forward voltage	V_F	SBL2030FCT-2045FCT	$I_F=10\text{A}$			0.55	V
		SBL2050FCT				0.7	
Typical total capacitance	C_{tot}	SBL2030-2050FCT	$V_R=4\text{V}, f=1\text{MHz}$		600		pF