

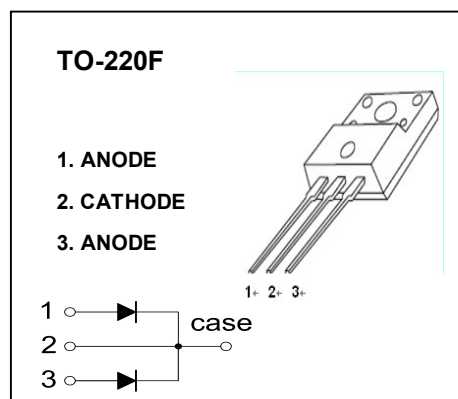
TO-220F Plastic-Encapsulate Diodes

SBL4030, 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
		SBL40 30FCT	SBL40 35FCT	SBL40 40FCT	SBL40 45FCT	SBL40 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	40					A
I_{FSM}	Non-Repetitive peak forward surge current 8.3ms half sine wave	400					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	$V_{(BR)}$	SBL4030FCT	$I_R=1\text{mA}$	30			V
		SBL4035FCT		35			
		SBL4040FCT		40			
		SBL4045FCT		45			
		SBL4050FCT		50			
Reverse current	I_R	SBL4030FCT	$V_R=30\text{V}$			1	mA
		SBL4035FCT	$V_R=35\text{V}$				
		SBL4040FCT	$V_R=40\text{V}$				
		SBL4045FCT	$V_R=45\text{V}$				
		SBL4050FCT	$V_R=50\text{V}$				
Forward voltage	V_F	SBL4030FCT-4045FCT	$I_F=20\text{A}$			0.58	V
		SBL4050FCT				0.7	
Typical total capacitance	C_{tot}	SBL4030FCT-4050FCT	$V_R=4\text{V}, f=1\text{MHz}$		800		pF