



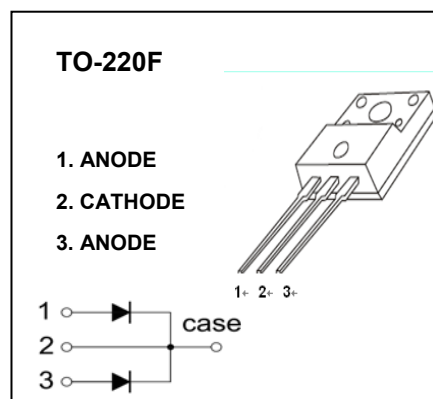
TO-220F Plastic-Encapsulate Diodes

MBRF3030, 35, 40, 45, 50CT

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
		MBRF30 30CT	MBRF30 35CT	MBRF30 40CT	MBRF30 45CT	MBRF30 50CT	
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	30					A
I_{FSM}	Non-Repetitive peak forward surge current 8.3ms half sine wave	200					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°C unless otherwise specified)

Parameter	Symbol	Device	Test conditions	Min	Typ	Max	Unit
Reverse voltage	V _(BR)	MBRF3030CT	I _R =1mA	30			V
		MBRF3035CT		35			
		MBRF3040CT		40			
		MBRF3045CT		45			
		MBRF3050CT		50			
Reverse current	I _R	MBRF3030CT	V _R =30V			0.2	mA
		MBRF3035CT	V _R =35V				
		MBRF3040CT	V _R =40V				
		MBRF3045CT	V _R =45V				
		MBRF3050CT	V _R =50V				
Forward voltage	V _{F1}	MBRF3030-45CT	I _F =15A			0.7	V
		MBRF3050CT				0.8	
	V _{F2} *	MBRF3030-45CT	I _F =30A			0.84	V
		MBRF3050CT				0.95	
Typical total capacitance	C _{tot} *	MBRF3030-45CT	V _R =4V,f=1MHz		450		pF
		MBRF3050CT			400		

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.