

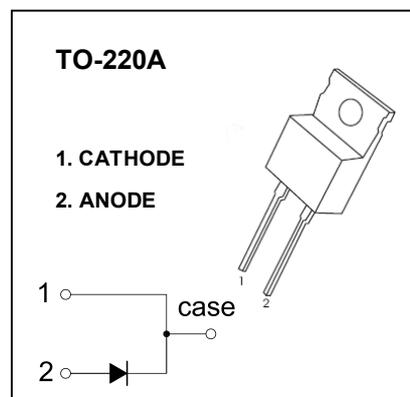
TO-220A Plastic-Encapsulate Diodes

MBR830, 35, 40, 45, 50, 60

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
		MBR 830	MBR 835	MBR 840	MBR 845	MBR 850	MBR 860	
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@ $T_c=125^\circ\text{C}$	8						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						$^\circ\text{C/W}$
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)	MBR830	I _R =0.1mA	30			V
		MBR835		35			
		MBR840		40			
		MBR845		45			
		MBR850		50			
		MBR860		60			
Reverse current	I _R	MBR830	V _R =30V			0.1	mA
		MBR835	V _R =35V				
		MBR840	V _R =40V				
		MBR845	V _R =45V				
		MBR850	V _R =50V				
		MBR860	V _R =60V				
Forward voltage	V _{F(1)}	MBR830-45	I _F =8A			0.7	V
		MBR850,60				0.8	
	V _{F(2)}	MBR830-45	I _F =16A			0.84	
		MBR850,60				0.95	
Typical junction capacitance	C _j	MBR830-60	V _R =4V,f=1MHz		250		pF