

MBR1045L(F,B,H)CT thru MBR10200L(F,B,H)CT

10A Schottky Barrier Rectifier

FEATURE

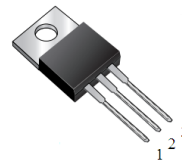
- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High ESD capability
- High temperature soldering guaranteed:
260°C/10s/0.25"(6.35mm) from case

MECHANICAL DATA

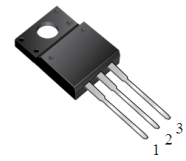
- Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- Mounting position: any

TYPICAL APPLICATIONS

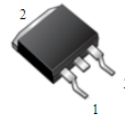
For use in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, DC/DC converters and polarity protection application.



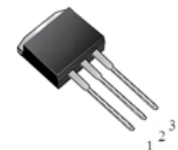
TO-220AB
MBR10XXLCT



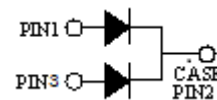
ITO-220AB
MBR10XXL^FCT



TO-262
MBR10XXL^BCT



TO-262
MBR10XXL^HCT



Ratings at 25°C ambient temperature unless otherwise specified, Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS

Parameter	Symbol	MBR1045 LCT	MBR1060 LCT	MBR10100 LCT	MBR10150 LCT	MBR10200 LCT	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	32	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}						V
Maximum Average Forward Rectified Current at $T_C=90^\circ\text{C}$	total device	10.0					A
	per diode	5.0					
Peak Forward Surge Current 8.3ms Single Half sine-wave superimposed on rate load per diode (JEDEC method)	I_{FSM}	120					A
Junction Capacitance (Note1)	C_J	700	300			pF	
Storage Temperature Range	T_{STG}	-55 to +150					°C
Operation Temperature Range	T_J	-55 to +150					°C

ELECTRONICAL CHARACTERISTICS

Parameter	Symbol	MBR1045 LCT	MBR1060 LCT	MBR10100 LCT	MBR10150 LCT	MBR10200 LCT	units
Maximum Forward Voltage Drop per diode at 5A (Note 2)	V_F	0.55	0.65	0.80	0.85	0.90	V
Maximum DC Reverse Current at rated DC blocking voltage (Note 2)	@ $T_C=25^\circ\text{C}$	0.15			0.1		mA
	@ $T_C=100^\circ\text{C}$	40.0			20.0		

THERMAL CHARACTERISTICS

Parameter	Symbol	ITO-220	TO-220	TO-262 TO-263	units
Typical Thermal Resistance (Note 3)	$R_{th(jc)}$	3.5	2.5	2.5	°C/W

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc.
2. Pulse test: 300 μs pulse width, 1% duty cycle.
3. Thermal Resistance from Junction to Case Mounted on heatsink.