

# MBR2045LCT

**Schottky Barrier Rectifier**  
 Reverse Voltage 45V  
 Forward Current 20A



## Features

- High Current Capability
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- Lead Free Finish/RoHS Compliant
  
- Case: Molded Plastic
- Polarity: Symbols molded or marked on body
- Mounting Position: Any
- Mounting torque: Recommend 0.3 N\*m

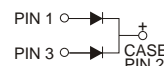
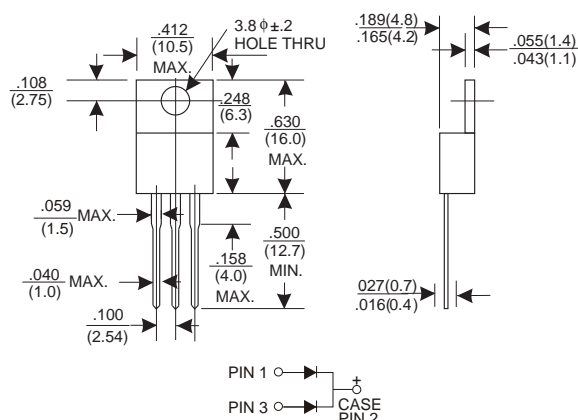
## VOLTAGE RANGE

45 Volts

## CURRENT

20.0 Ampere

TO-220AB



Dimensions in inches and (millimeters)

## Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	MBR2045LCT	Units
Maximum DC blocking voltage	$V_{DC}$	45	Volts
Working Peak Reverse Voltage	$V_{RWM}$		
Maximum repetitive peak reverse voltage	$V_{RRM}$		
Maximum average forward rectified current	$I_{F(AV)}$	20	Amps
Peak forward surge current 8.3 ms single half sine-wave	$I_{FSM}$	180	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	$I_{RRM}$	2	Amps
Typical Thermal Resistance (per leg)	$R_{\theta_{Jc}}$	2	°C / W
Operating Junction Temperature	$T_J$	- 65 to +150	°C
Storage Junction Temperature	$T_{STG}$	- 65 to +150	
Voltage rate of change (Rated $V_R$ )	$dV/dt$	10000	V/ $\mu$ s

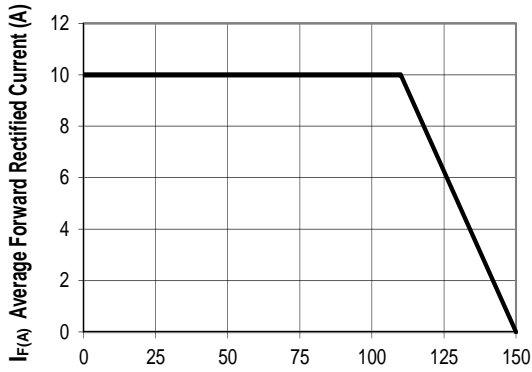
## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Test Conditions	Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	$I_F = 10 \text{ A}$	$V_F^*$	---	0.50	Volts
			$T_J = 25^\circ\text{C}$	0.46	
Instantaneous Reverse Current	At $V_{RM}$	IR	---	500	$\mu\text{A}$
			$T_J = 125^\circ\text{C}$	---	100

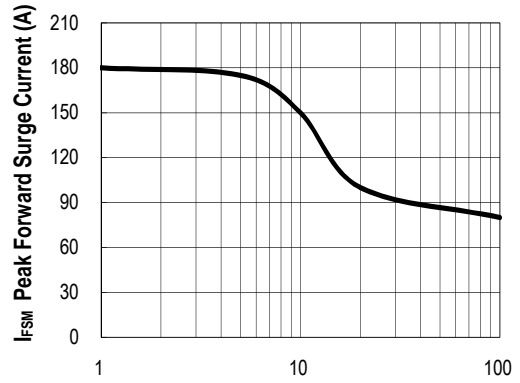
## RATINGS AND CHARACTERISTIC CURVES (MBR2045LCT)

FORWARD CURRENT DERATING CURVE



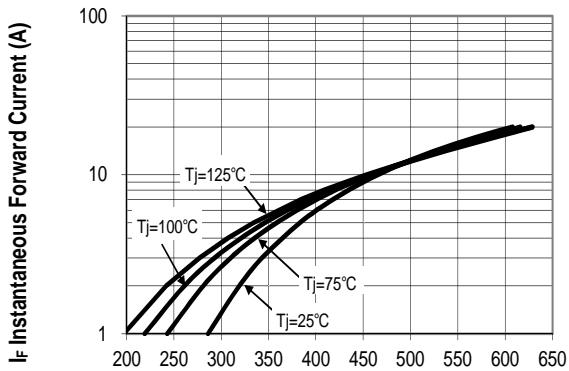
$T_c$ , Case Temp (°C)

MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT



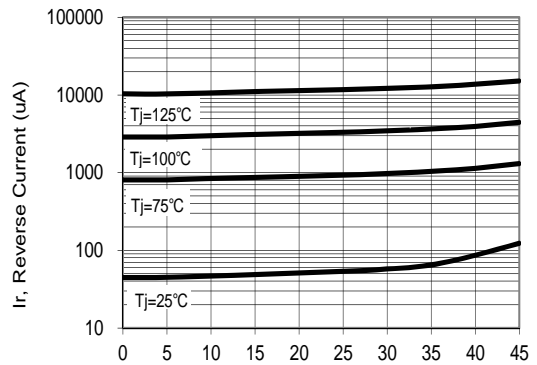
Number of Cycles at 60 Hz

TYPICAL FORWARD CHARACTERISTIC



$V_f$ , Instantaneous Forward Voltage (mV)

TYPICAL REVERSE CURRENT



$V_R$ , Reverse Voltage (Volts)