

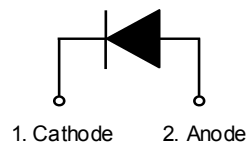
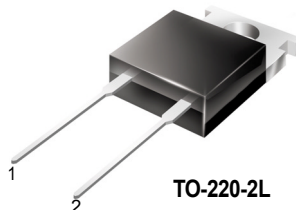
## MBRP745

### Features

- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection

### Applications

- Switched mode power supply
- Freewheeling diodes



## SCHOTTKY BARRIER RECTIFIER

### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{RRM}$	Maximum Repetitive Reverse Voltage	45	V
$V_R$	Maximum DC Reverse Voltage	45	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_C = 110^\circ\text{C}$	7.5	A
$I_{FSM}$	Non-repetitive Peak Surge Current (per diode) 60Hz Single Half-Sine Wave	150	A
$T_J, T_{STG}$	Operating Junction and Storage Temperature	-65 to +150	$^\circ\text{C}$

### Thermal Characteristics

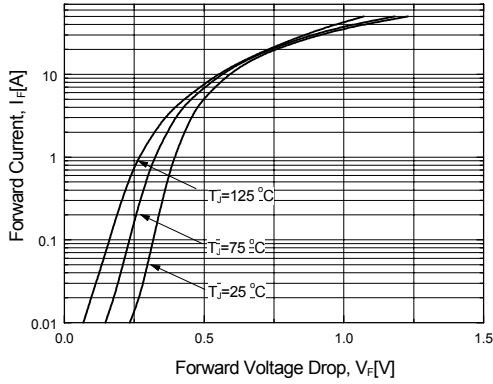
Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case (per diode)	3.0	$^\circ\text{C}/\text{W}$

### Electrical Characteristics (per diode)

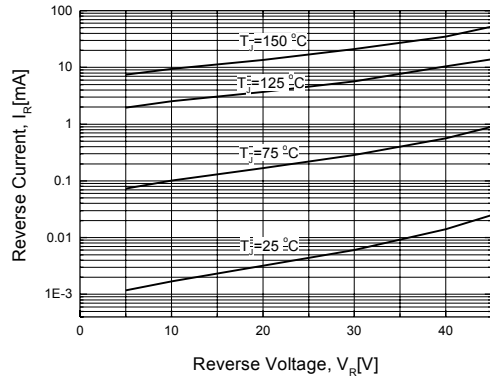
Symbol	Parameter	Value	Units
$V_{FM}^*$	Maximum Instantaneous Forward Voltage $I_F = 7.5\text{A}$ $I_F = 7.5\text{A}$ $I_F = 15\text{A}$ $I_F = 15\text{A}$	$T_C = 25^\circ\text{C}$	0.65
		$T_C = 125^\circ\text{C}$	0.57
		$T_C = 25^\circ\text{C}$	0.80
		$T_C = 125^\circ\text{C}$	0.65
$I_{RM}^*$	Maximum Instantaneous Reverse Current @ rated $V_R$	$T_C = 25^\circ\text{C}$	1
		$T_C = 125^\circ\text{C}$	40

\* Pulse Test: Pulse Width=300 $\mu\text{s}$ , Duty Cycle=2%

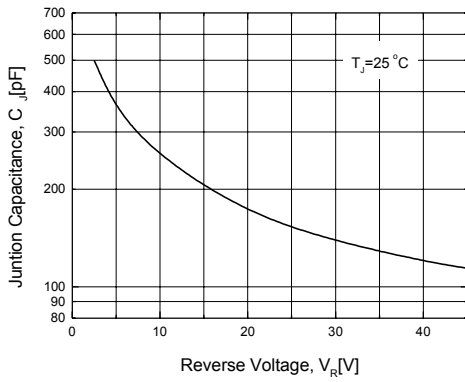
# Typical Characteristics



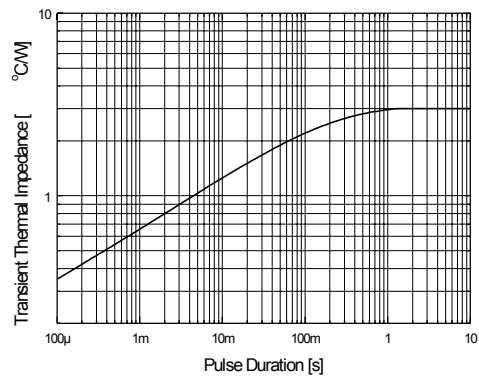
**Figure 1. Typical Forward Voltage Characteristics (per diode)**



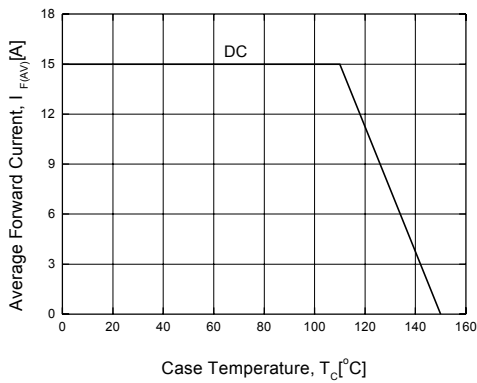
**Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)**



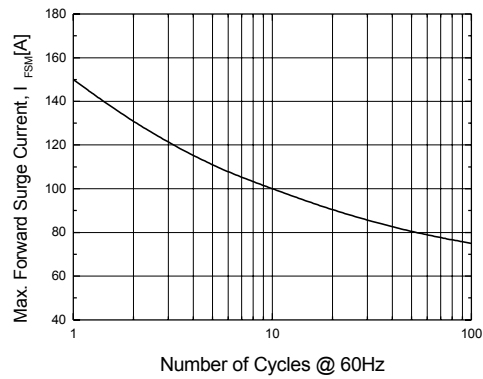
**Figure 3. Typical Junction Capacitance (per diode)**



**Figure 4. Thermal Impedance Characteristics (per diode)**



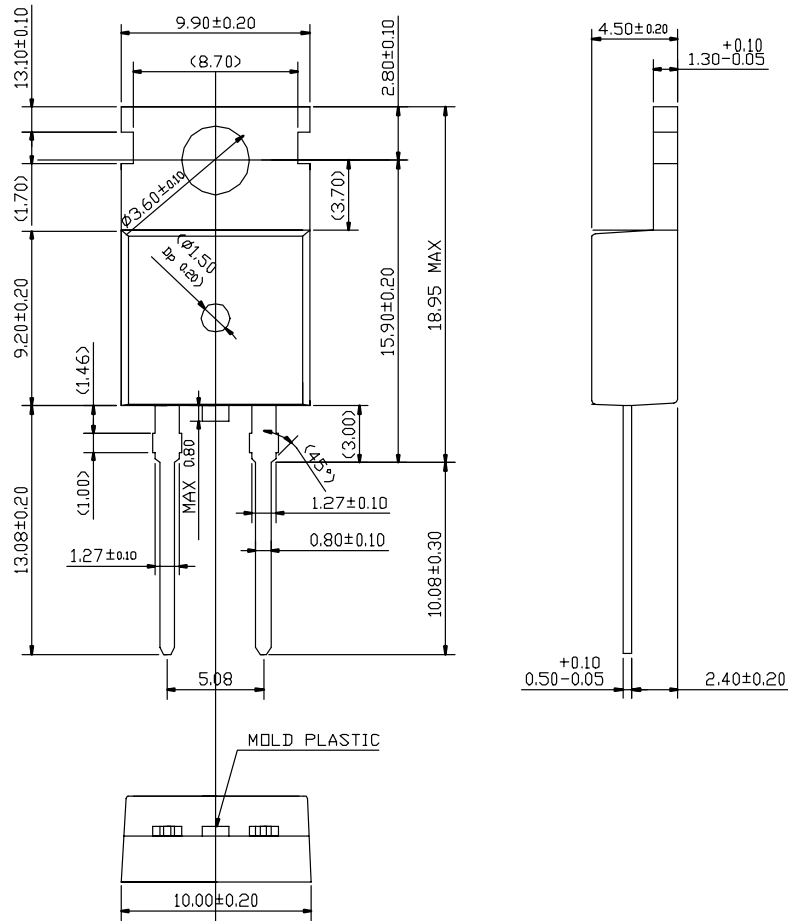
**Figure 5. Forward Current Derating Curve**



**Figure 6. Non-Repetitive Surge Current (per diode)**

# Package Dimsions

## TO-220-2L



Dimensions in Millimeters

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E <sup>2</sup> CMOS™	I <sup>2</sup> C™	OCX™	RapidConnect™	UHC™
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## MBRP745

Schottky Barrier Rectifier

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### Features

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### Applications

- Switched mode power supply
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**Product status/pricing/packaging**

**BUY**

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method
MBRP745TU	Full Production	 Full Production	\$0.485	<a href="#">TO-220</a>	3	RAIL

\* Fairchild 1,000 piece Budgetary Pricing

\*\* A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

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