

Schottky Barrier Rectifier

MBR6045PT

FEATURES

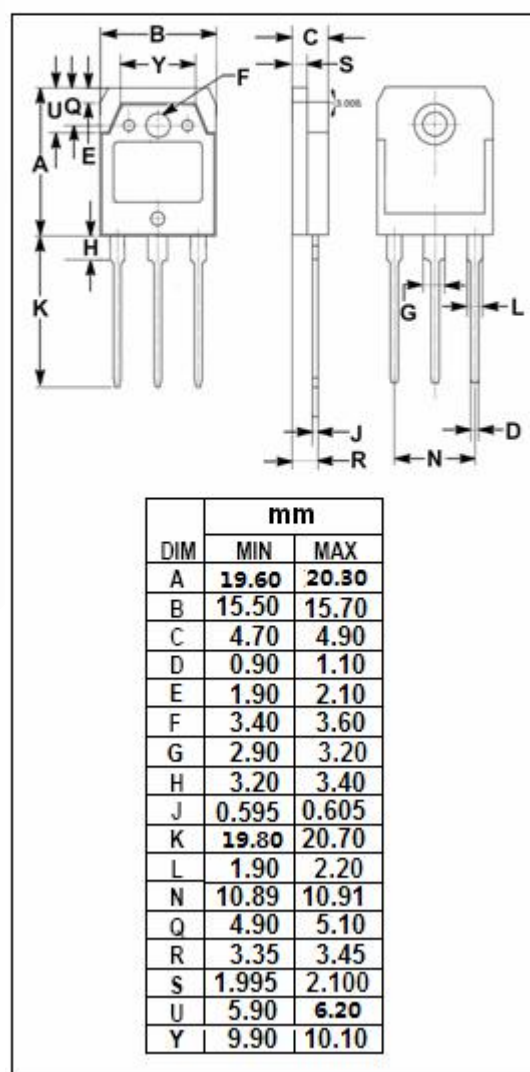
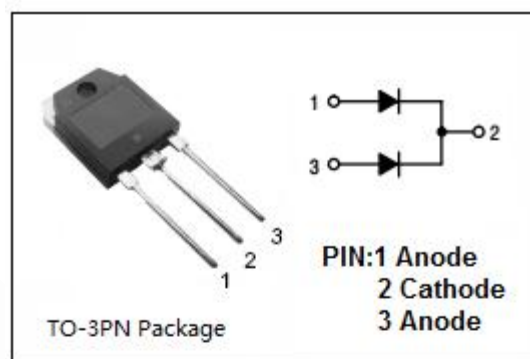
- Low Forward Voltage
- Low Power Loss,High Efficiency
- High Surge Capability
- 175°C Operating Junction Temperature
- Pb-Free Package is Available
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Power Supply-Output Rectification
- Power Management
- Instrumentation

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RWM} V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	45	V
I _{F(AV)}	Average Rectified Forward Current	60	A
I _{FSM}	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions	500	A
I _{RRM}	Peak Repetitive Reverse Surge Current (20 μ s, 1.0kHz)	2.0	A
T _J	Junction Temperature	-65~175	°C
T _{stg}	Storage Temperature Range	-65~175	°C
dv/dt	Voltage Rate of Change (Rated V _R)	10,000	V/ μ s



Schottky Barrier Rectifier**MBR6045PT****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^{\circ}\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	60	$^{\circ}\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μ s, Duty Cycle $\leq$ 2.0%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 30\text{A}; T_c = 25^{\circ}\text{C}$	0.62	V
		$I_F = 30\text{A}; T_c = 125^{\circ}\text{C}$	0.55	
		$I_F = 60\text{A}; T_c = 25^{\circ}\text{C}$	0.75	
I_R	Maximum Instantaneous Reverse Current	$V_R = V_{RWM}; T_c = 25^{\circ}\text{C}$	1.0	mA
		$V_R = V_{RWM}; T_c = 125^{\circ}\text{C}$	10	