

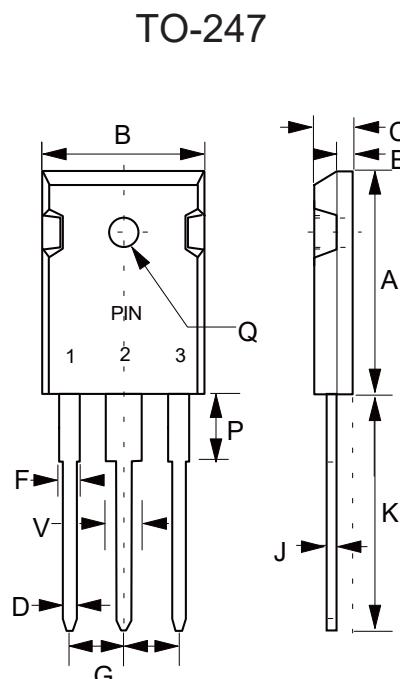
## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- High Surge Capacity, High Current Capability

# 60 Amp Schottky Barrier Rectifier 45 Volts

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	45	V
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{RMS}$	31.5	V
Average Rectified Forward Current Per Diode Per Device	$I_{F(AV)}$	30 60	A
Non-Repetitive Peak Surge Current (Per Diode) @ 8.3ms Half Sine Wave	$I_{FSM}$	300	A
Current Squared Time (Per Diode) @ 1ms $\leq t \leq$ 8.3ms	$I^2t$	373.5	$A^2s$



Marking Diagram	Internal Structure
 Marking Code : MBR6045PTS	

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.787	0.866	20.00	22.00	
B	0.598	0.638	15.20	16.20	
C	0.185	0.208	4.70	5.30	
D	0.035	0.059	0.90	1.50	
E	0.059	0.094	1.50	2.40	
F	0.067	0.091	1.70	2.30	
J	0.019	0.031	0.48	0.80	
K	0.748	0.833	19.00	21.15	
P	0.122	0.189	3.10	4.80	
Q	0.118	0.150	3.00	3.80	Φ
V	0.106	0.134	2.70	3.40	
G	0.197	0.224	5.00	5.70	

**Thermal characteristics**

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case			0.6		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient			40		°C/W

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage Per Diode	$V_F$	$I_F=30A; T_J=25°C$		0.62	0.67	V
		$I_F=30A; T_J=125°C$		0.59		
Reverse Current Per Diode	$I_R$	$V_R=45V; T_J=25°C$			0.2	mA
		$V_R=45V; T_J=125°C$			50	
Junction Capacitance Per Diode	$C_J$	$V_R=4V; f=1MHz; T_J=25°C$		0.975		nF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

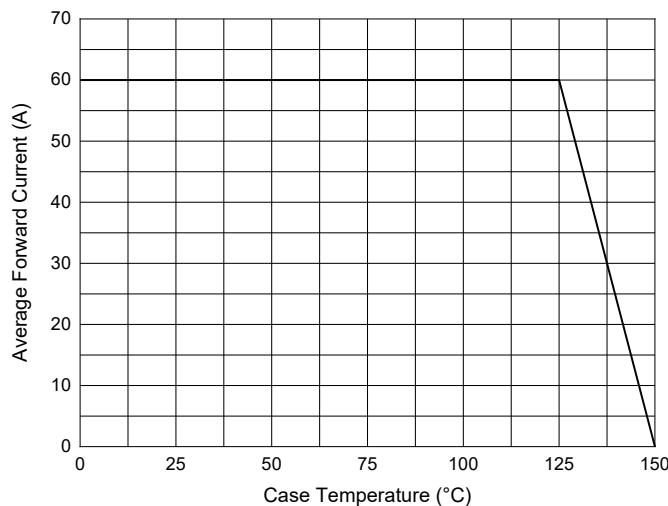


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

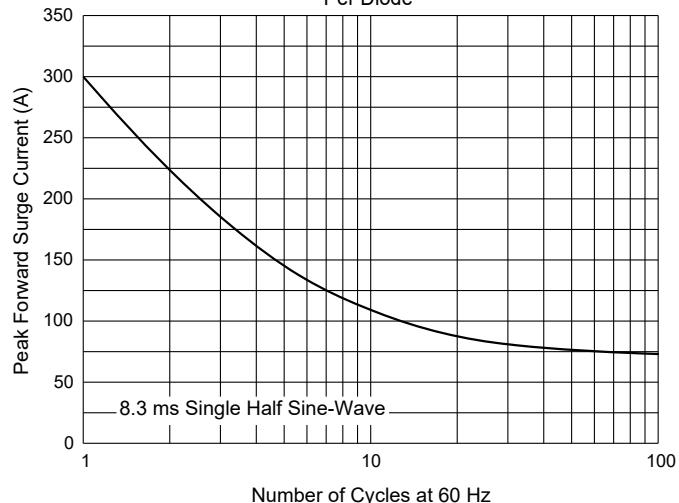


Fig. 3 - Typical Forward Characteristics Per Diode

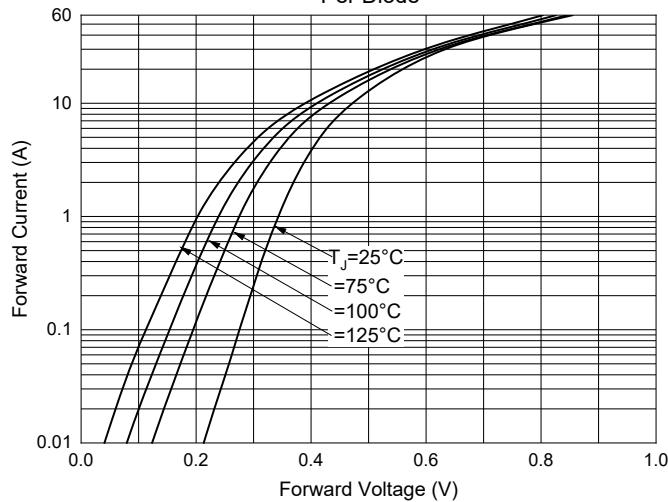


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

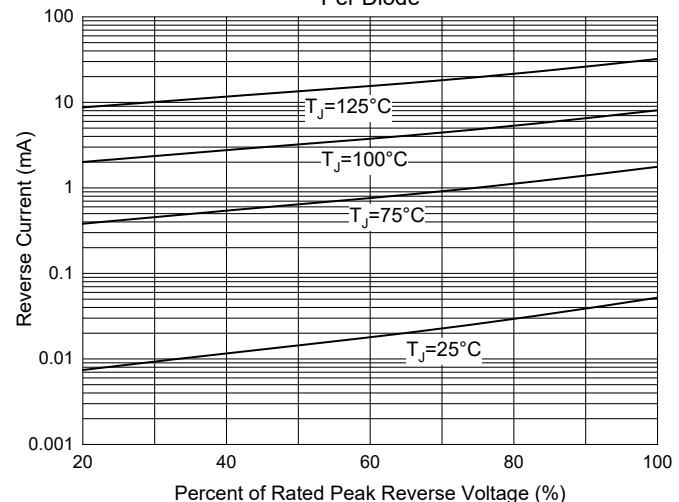
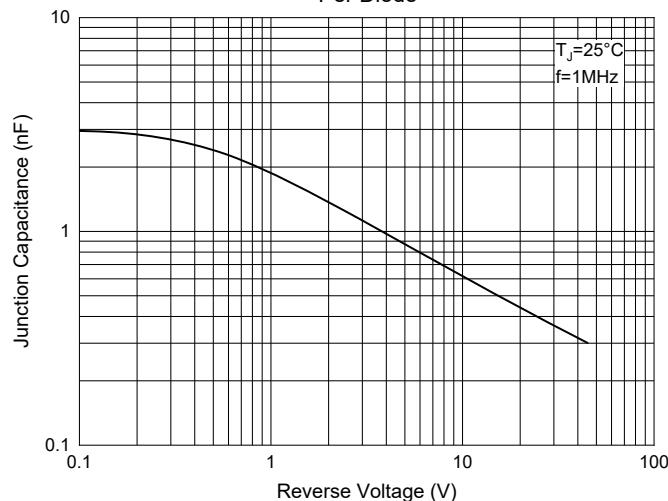


Fig. 5 - Typical Capacitance Characteristics Per Diode



## Ordering Information

Device	Packing
MBR6045PTS-BP	Bulk:30pcs/Tube,360pcs/Box,1.8Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. MBR6045PTS-BP-HF

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