


# Advance Information

## SWITCHMODE™ Schottky Power Rectifier

**MBR25060V**

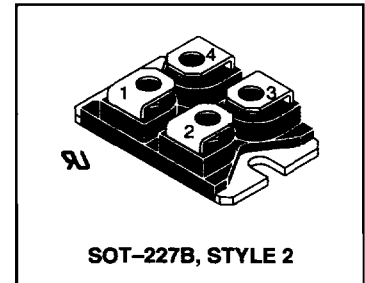
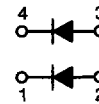
**SCHOTTKY BARRIER  
RECTIFIER  
100 AMPERES  
60 VOLTS**

... using the Schottky Barrier principle with a Platinum barrier metal. This state-of-the-art device has the following features:

- 60 V Blocking Voltage, Low Forward Voltage Drop
- Double Rectifier Diodes Construction: May Be Paralleled for Higher Current Output up to 100 Amp
- Guardring Construction Guarantees Stress Protection, High dV/dt Capability (10 kV/μs) and Reverse Avalanche
- Very Low Internal Parasitic Inductance (≤ 5.0 nH)
- Isolated Power Package (2500 Vac Insulation Rating)
- 150°C Operating Junction Temperature
-  — UL Recognized, File #E69369

### Mechanical Characteristics

- Case: Molded epoxy with isolated metal base
- Weight: 28 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant
- Shipped 10 units per plastic tube
- Marking: MBR25060V



### MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	60	Volts
Average Rectified Forward Current — Per Diode (Rated $V_R$ ) @ $T_C = 125^\circ\text{C}$ — Per Device	$I_{F(AV)}$	50 100	Amps
Peak Repetitive Forward Current, Per Diode (Rated $V_R$ , Square Wave, 20 kHz) @ $T_C = 90^\circ\text{C}$	$I_{FRM}$	150	Amps
Non Repetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	$I_{FSM}$	800	Amps
Peak Repetitive Reverse Current (2.0 μs, 1.0 kHz)	$I_{RRM}$	2.0	Amps
Operating Junction Temperature	$T_J$	-65 to 150	°C
Storage Temperature	$T_{stg}$	-65 to 150	°C
Peak Surge Junction Temperature (Forward Current Applied)	$T_{J(pk)}$	175	°C
Voltage Rate of Change	dV/dt	10000	V/μs
Package Insulation Rating (AC)	$V_{isol}$	2500	Volts

### THERMAL CHARACTERISTICS

Thermal Resistance, Junction to Case	Per Diode Per Device	$R_{\theta JC}$	1.2 0.7	°C/W
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### ELECTRICAL CHARACTERISTICS PER DIODE

Instantaneous Forward Voltage (1) @ $i_F = 50$ Amps, $T_C = 25^\circ\text{C}$ @ $i_F = 50$ Amps, $T_C = 100^\circ\text{C}$	$v_F$	0.65 0.60	Volts
Instantaneous Reverse Current (1) @ Rated DC Voltage, $T_C = 25^\circ\text{C}$ @ Rated DC Voltage, $T_C = 100^\circ\text{C}$	$i_R$	0.5 20	mA

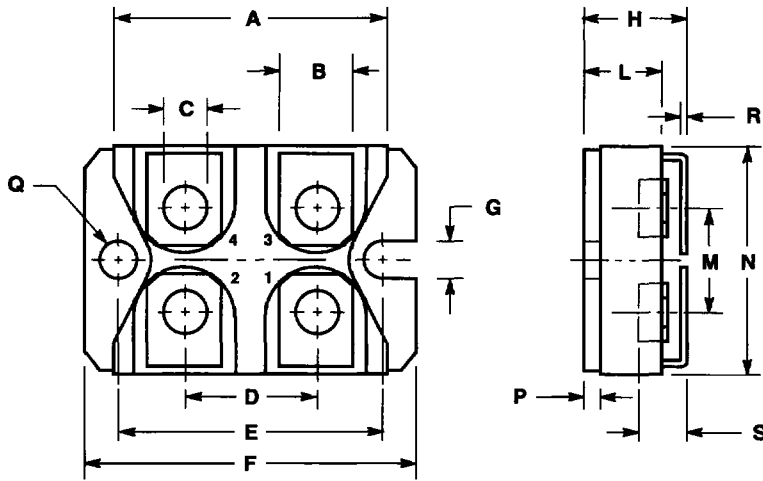
(1) Pulse Test: Pulse Width = 300 μs, Duty Cycle < 2.0%

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This document contains information on a new product. Specifications and information herein are subject to change without notice.

\*MOT05867\*

PACKAGE DIMENSIONS




Recommended screw torque:  $1.3 \pm 0.2$  Nm  
 Maximum screw torque: 1.5 Nm

- NOTES:  
 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.  
 2. CONTROLLING DIMENSION: MILLIMETERS.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	31.50	31.70	1.240	1.248
B	7.80	8.20	0.307	0.322
C	4.10	4.30	0.161	0.169
D	14.90	15.10	0.586	0.590
E	30.10	30.30	1.185	1.193
F	38.00	38.20	1.496	1.503
G	4.00	—	0.157	—
H	11.80	12.20	0.464	0.480
L	8.90	9.10	0.350	0.358
M	12.60	12.80	0.496	0.503
N	25.20	25.40	0.992	1.000
P	1.85	2.05	0.076	0.080
Q	4.10	—	0.157	—
R	0.75	0.85	0.030	0.033
S	5.50	—	0.217	—

- STYLE 2:  
 PIN 1. CATHODE 1  
 2. ANODE 2  
 3. CATHODE 2  
 4. ANODE 1

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