

Schottky Dual Diode

MBR4060PT

60V / 40A

DATASHEET

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OEM – General Semiconductor

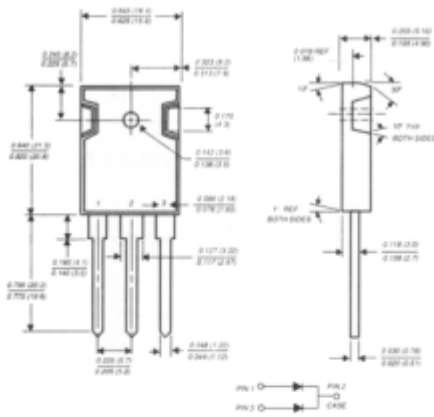
Source: General Semiconductor Databook 1998

MBR4035PT THRU MBR4060PT

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts Forward Current - 40.0 Amperes

TO-247AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Dual rectifier construction, positive center-tap
- ◆ Metal silicon rectifier, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.17" (4.3mm) from case



MECHANICAL DATA

Case: JEDEC TO-247AD molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Mounting Torque: 10 in. - lbs. max.
Weight: 0.2 ounce, 5.6 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | MBR4035PT | MBR4045PT | MBR4050PT | MBR4060PT | UNITS |
|---|-------------------|------------------------------|-----------|------------------------|-----------|-------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 35 | 45 | 50 | 60 | Volts |
| Maximum working peak reverse voltage | V _{RMS} | 35 | 45 | 50 | 60 | Volts |
| Maximum DC blocking voltage | V _{DC} | 35 | 45 | 50 | 60 | Volts |
| Maximum average forward rectified current at T _C =125°C | I _(AV) | 40.0 | | | | Amps |
| Peak repetitive forward current per leg at T _C =120°C (rated V _R square wave, 20 KHz) | I _{FRM} | 40.0 | | | | Amps |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 400.0 | | | | Amps |
| Peak repetitive reverse surge current (NOTE 1) | I _{RRM} | 2.0 | | 1.0 | | Amps |
| Maximum instantaneous forward voltage per leg at (NOTE 2) I _F =20A, T _C =25°C I _F =20A, T _C =125°C I _F =40A, T _C =25°C I _F =40A, T _C =125°C | V _F | 0.70 0.60 0.80 0.75 | | 0.72 0.62 - - | | Volts |
| Maximum instantaneous reverse current at T _C =25°C rated DC blocking voltage per leg (NOTE 2) T _C =125°C | I _R | 1.0 100.0 | | | | mA |
| Typical thermal resistance per leg (NOTE 3) | R _{θJC} | 1.2 | | | | °C/W |
| Voltage rate of change (rated V _R) | dv/dt | 10,000 | | | | V/μs |
| Operating junction temperature range | T _J | -65 to +150 | | | | °C |
| Storage temperature range | T _{STG} | -65 to +175 | | | | °C |

NOTES:

- (1) 2.0μs pulse width, f=1.0 KHz
- (2) Pulse test: 300μs pulse width, 1% duty cycle
- (3) Thermal resistance from junction to case per leg

RATINGS AND CHARACTERISTIC CURVES MBR4035PT THRU MBR4060PT

