

Schottky Diode

MBR735

35V / 7,5A

DATASHEET

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OEM – General Semiconductor

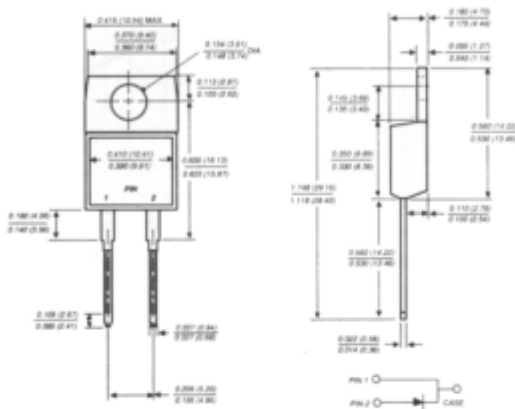
Source: General Semiconductor Databook 1998

MBR735 THRU MBR760

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts Forward Current - 7.5 Amperes

TO-220AC



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Metal to 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, 0.25" (6.35mm) from case



MECHANICAL DATA

Case: JEDEC TO-220AC molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Mounting Torque: 5 in. - lbs. max.
Weight: 0.08 ounces, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | MBR735 | MBR745 | MBR750 | MBR760 | UNITS |
|---|--------------------------------------|--|---------------------------|--------|------------------------|-------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 35 | 45 | 50 | 60 | Volts |
| Maximum working peak reverse voltage | V _{RWM} | 35 | 45 | 50 | 60 | Volts |
| Maximum DC blocking voltage | V _{DC} | 35 | 45 | 50 | 60 | Volts |
| Maximum average forward rectified current (SEE FIG 1) | I _(AV) | 7.5 | | | | Amps |
| Peak repetitive forward current (square wave, 20 KHz) at T _C =105°C | I _{FRM} | 15.0 | | | | Amps |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 150.0 | | | | Amps |
| Peak repetitive reverse surge current (NOTE 1) | I _{RRM} | 1.0 | | 0.5 | | Amps |
| Maximum instantaneous forward voltage at (NOTE 2) | V _F | I _F =7.5A, T _C =25°C I _F =7.5A, T _C =125°C I _F =15A, T _C =25°C I _F =15A, T _C =125°C | - 0.57 0.84 0.72 | | 0.75 0.65 - - | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 1) | I _R | T _C =25°C T _C =125°C | 0.1 15.0 | | 0.5 50 | mA |
| Voltage rate of change (rated V _R) | dv/dt | 10,000 | | | | V/μs |
| Maximum thermal resistance, (NOTE 3) | R _{θJC} R _{θJA} | 3.0 60.0 | | | | °C/W |
| 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 and/or thermal resistance from junction to ambient

RATINGS AND CHARACTERISTIC CURVES MBR735 THRU MBR760

