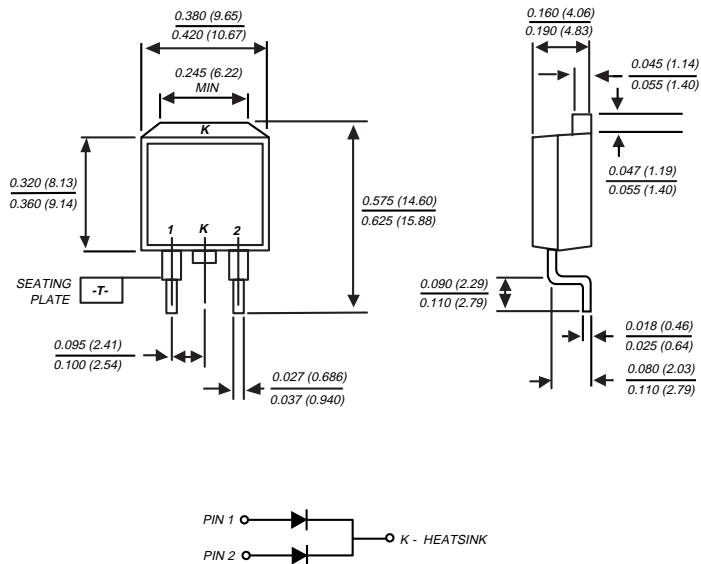


MBRB2035CT THRU MBRB2060CT

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts Forward Current - 20.0 Amperes

TO-263AB



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Dual rectifier construction, positive center tap
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ Guardring for overvoltage protection
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering in accordance with CECC 802 / Reflow guaranteed



MECHANICAL DATA

Case: JEDEC TO-263AB molded plastic
Terminals: Leads solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | MBRB2035CT | MBRB2045CT | MBRB2050CT | MBRB2060CT | 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 at $T_C=135^\circ\text{C}$ | $I_{(AV)}$ | 20.0 | | | | Amps |
| Peak repetitive forward current per leg at $T_C=135^\circ\text{C}$ (rated V_R , sq. wave 2.0 KHz) | I_{FRM} | 20.0 | | | | 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 per leg at $I_F=10\text{A}$, $T_C=25^\circ\text{C}$ (NOTE 2) $I_F=10\text{A}$, $T_C=125^\circ\text{C}$ $I_F=20\text{A}$, $T_C=25^\circ\text{C}$ $I_F=20\text{A}$, $T_C=125^\circ\text{C}$ | V_F | 0.57 0.84 0.72 | | 0.80 0.70 0.95 0.85 | | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage per leg $T_C=25^\circ\text{C}$ $T_C=125^\circ\text{C}$ | I_R | 0.1 15.0 | | 0.15 150.0 | | mA |
| Voltage rate of change, (rated V_R) | dv/dt | 10,000 | | | | V/ μs |
| Typical thermal resistance per leg (NOTE 3) | $R_{\theta JC}$ | 2.0 | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | -65 to +150 | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -65 to +175 | | | | $^\circ\text{C}$ |

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

RATINGS AND CHARACTERISTIC CURVES MBRB2035CT THRU MBRB2060CT

