

20A Dual Schottky Rectifiers

PRODUCT SUMMARY

Voltage ratings available from 35 to 60 Volts

FEATURES

- Plastic packages have Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal-silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- High temperature soldering guaranteed:
250°C for 10 seconds, 0.25" (6.35mm) from case
- Case: JEDEC TO-220AB (MBR...) or ITO-220AB (MBRB...) molded plastic body - for dimensions, see page 3
- Terminals: Matte-Sn plated leads, solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting Position: Any
- Mounting Torque: 10 in-lbs maximum
- Weight: 0.08 ounce, 2.24 grams

 Pb-free; RoHS-compliant

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

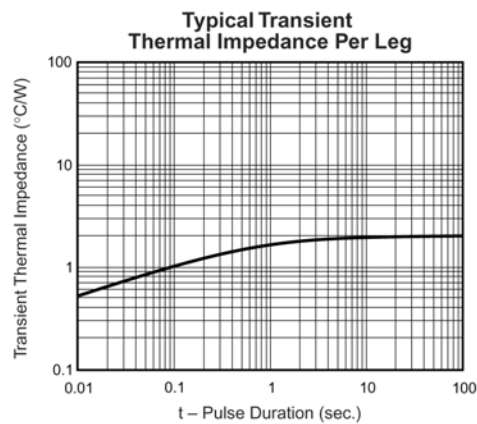
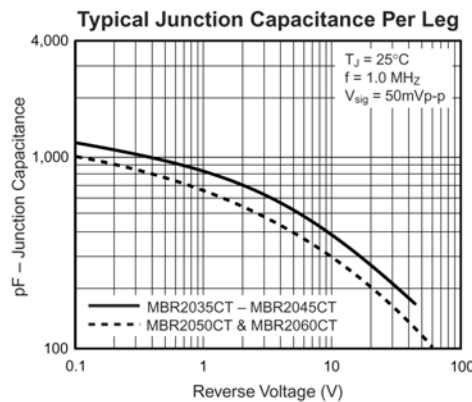
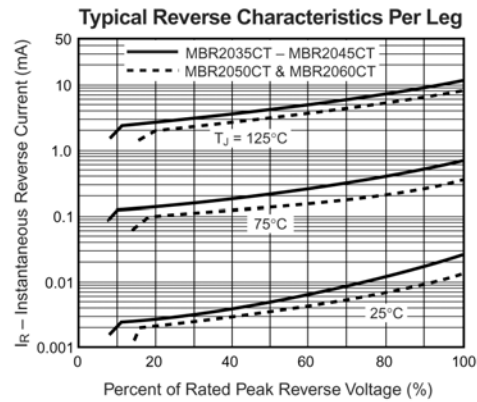
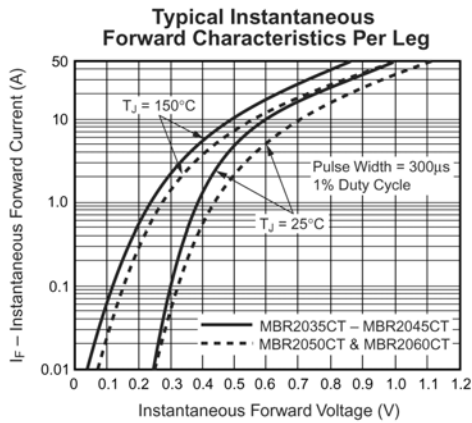
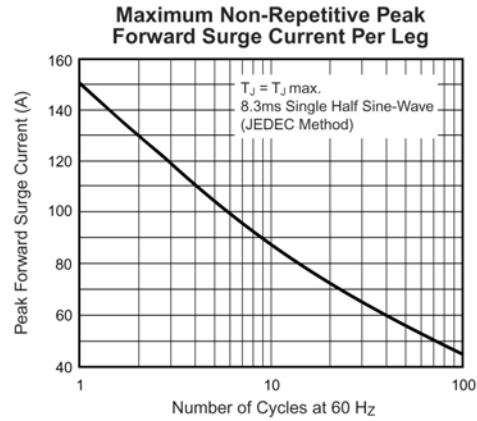
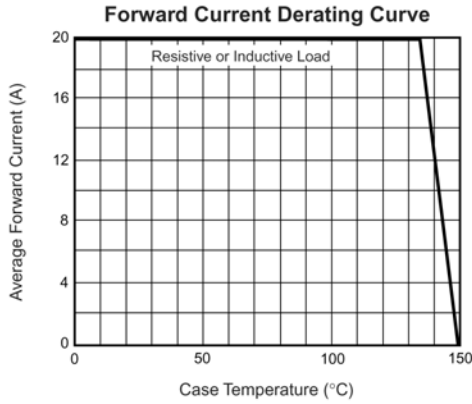
- Rating at 25°C ambient temperature unless otherwise specified.
- Single phase, half wave, 60 Hz, resistive or inductive load.
- For capacitive load, derate current by 20%

| Parameter | Symbol | MBR2035CT | MBR2045CT | MBR2050CT | MBR2060CT | Units |
|--|--------------------------------------|-------------------------|------------|------------|------------|--------------------|
| | | MBRB2035CT | MBRB2045CT | MBRB2050CT | MBRB2060CT | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 35 | 45 | 50 | 60 | Volts |
| 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 $T_c=135^\circ\text{C}$ | Total device Per leg I_{FAV} | 20 | | | | Amps |
| | | 10 | | | | |
| Peak repetitive forward current per leg at (rated V_R , sq. wave, 20kHz) at $T_c=135^\circ\text{C}$ | I_{FRM} | 20 | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg | I_{FSM} | 150 | | | | Amps |
| Peak repetitive reverse surge current per leg at $t_p = 2.0\mu\text{s}$, 1KHz | I_{RRM} | 1.0 | | 0.5 | | Amps |
| Voltage rate of change (rated V_R) | dv/dt | 10,000 | | | | V/us |
| Maximum instantaneous forward voltage per leg (Note 1) | V_F | | | | | Volt |
| at $I_F=10\text{A}$, $T_c=25^\circ\text{C}$ | | | | | 0.80 | |
| at $I_F=10\text{A}$, $T_c=125^\circ\text{C}$ | | 0.57 | | | 0.70 | |
| at $I_F=20\text{A}$, $T_c=25^\circ\text{C}$ | | 0.84 | | | 0.95 | |
| at $I_F=20\text{A}$, $T_c=125^\circ\text{C}$ | 0.72 | | | 0.85 | | |
| Maximum reverse current at rated DC blocking voltage per leg (Note 1) | I_R | $T_c=25^\circ\text{C}$ | 0.1 | | 0.15 | mA |
| | | $T_c=125^\circ\text{C}$ | 15 | | 150 | |
| Thermal resistance from junction to case per leg | $R_{\theta JC}$ | 2.0 | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +150 | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | $^\circ\text{C}$ |

Notes: 1. Pulse test: 300us pulse width, 1% duty cycle

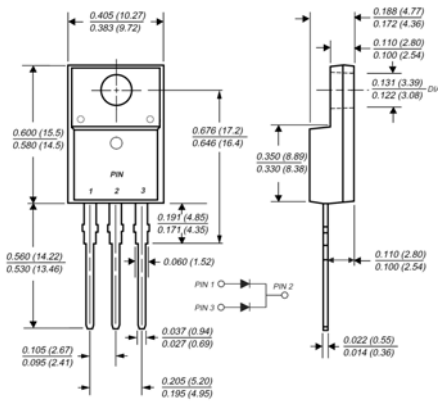
RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

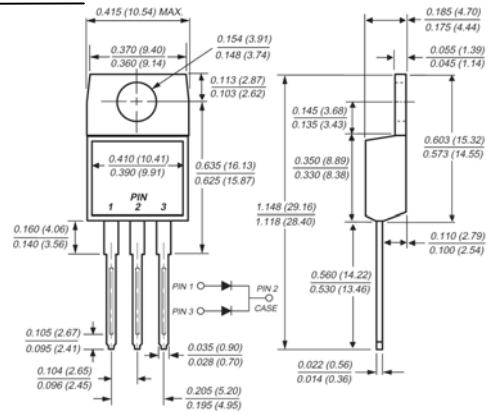


PHYSICAL DIMENSIONS

ITO-220AB



TO-220AB



Dimensions in inches and (millimeters)

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