

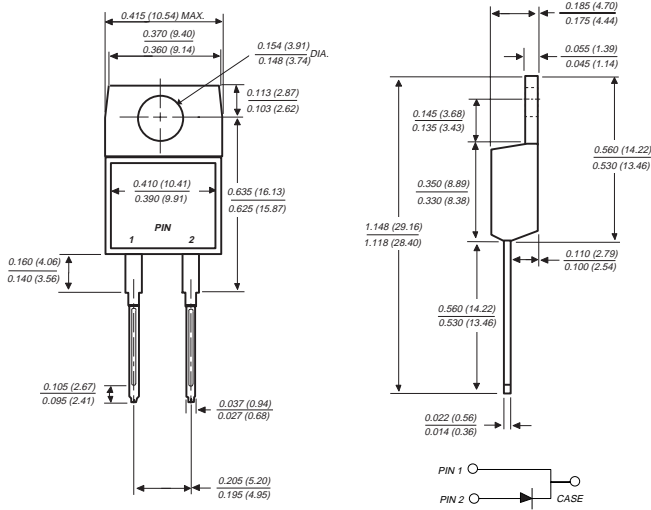
MBR1035 THRU MBR1060

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts

Forward Current - 10.0 Amperes

TO-220AC



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Metal silicon junction, 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: Leads solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5 in. - lbs. max.

Weight: 0.08 ounces, 1.81 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | MBR1035 | MBR1045 | MBR1050 | MBR1060 | 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) | $I_{(AV)}$ | 10.0 | | | | Amps |
| Peak repetitive forward current at $T_C=135^\circ\text{C}$ (square wave 20 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 |
| Voltage rate of change (rated V_R) | dv/dt | 10,000 | | | | $V_{\mu s}$ |
| Maximum instantaneous forward voltage at (NOTE 2) $I_F=10A, T_C=25^\circ\text{C}$ $I_F=10A, T_C=125^\circ\text{C}$ $I_F=20A, T_C=25^\circ\text{C}$ $I_F=20A, T_C=125^\circ\text{C}$ | 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 $T_C=25^\circ\text{C}$ (NOTE 2) $T_C=125^\circ\text{C}$ | I_R | 0.10 15.0 | | | | mA |
| Maximum thermal resistance, junction to case | $R_{\theta JC}$ | 2.0 | | | | $^\circ\text{C/W}$ |
| 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, $f=1.0$ KHz

(2) Pulse test: 300 μs pulse width, 1% duty cycle

RATINGS AND CHARACTERISTIC CURVES MBR1035 THRU MBR1060

FIG. 1 - FORWARD CURRENT DERATING CURVE

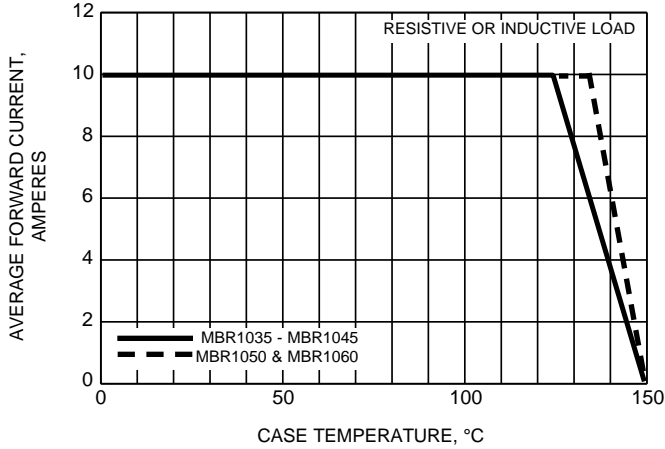


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

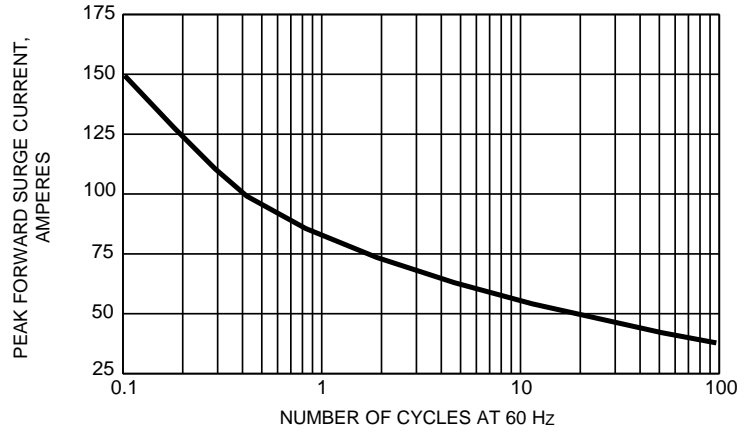


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

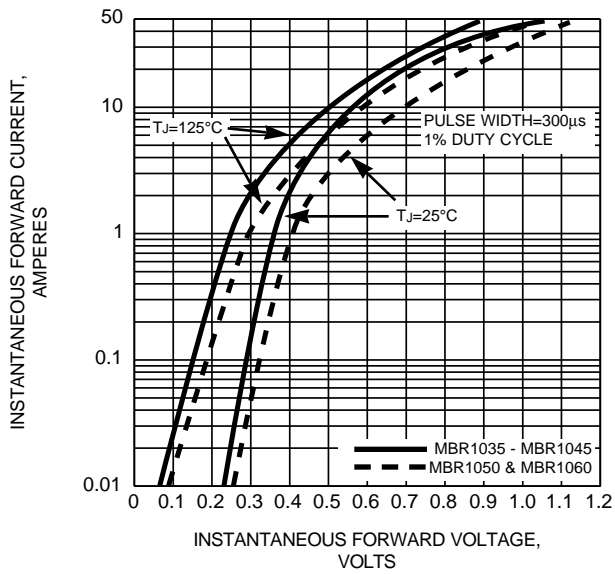


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

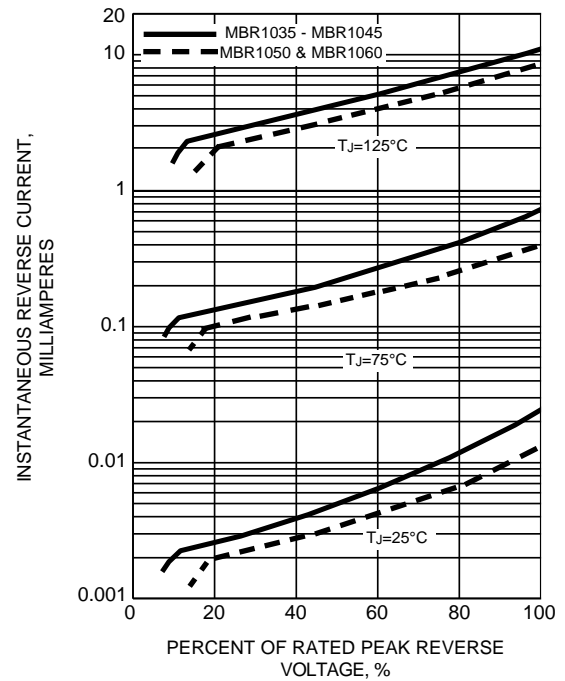


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

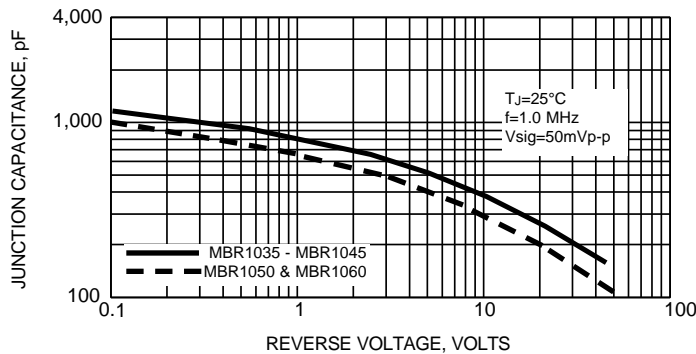
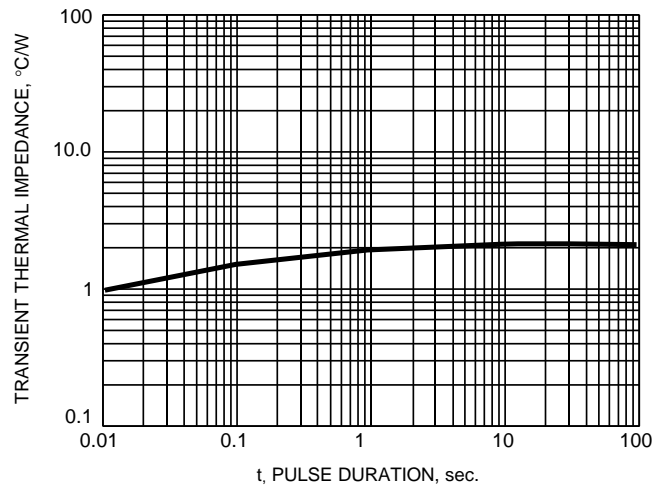


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.