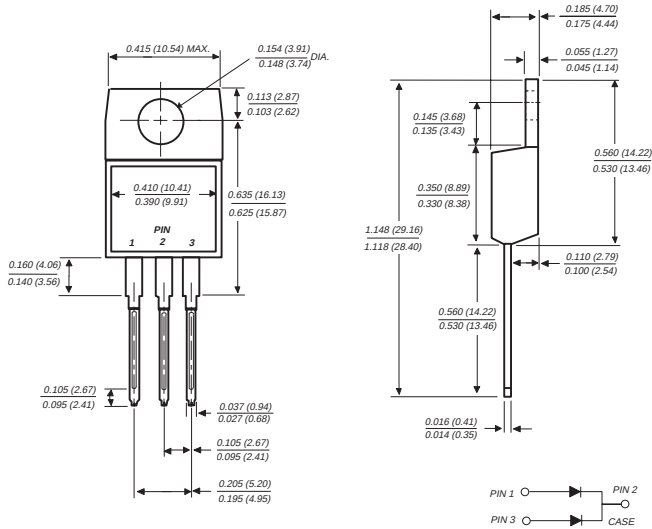


# MBR2035CT THRU MBR2060CT

## SCHOTTKY RECTIFIER

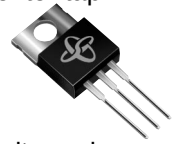
Reverse Voltage - 35 to 60 Volts    Forward Current - 20.0 Amperes

### TO-220AB



### 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 guaranteed:  
250°C/10 seconds, 0.25" (6.35mm) from case



### MECHANICAL DATA

**Case:** JEDEC TO-220AB molded plastic  
**Terminals:** Leads solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Mounting Position:** Any

**Mounting Torque:** 5 in. - lbs.max.

**Weight:** 0.08 ounce, 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                                                                                                                                                              | SYMBOLS           | MBR2035CT                 | MBR2045CT | MBR2050CT                    | MBR2060CT | UNITS |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|-----------|------------------------------|-----------|-------|
| Maximum repetitive peak reverse voltage                                                                                                                                                                                                      | V <sub>RRM</sub>  | 35                        | 45        | 50                           | 60        | Volts |
| Maximum working peak reverse voltage                                                                                                                                                                                                         | V <sub>RWM</sub>  | 35                        | 45        | 50                           | 60        | Volts |
| Maximum DC blocking voltage                                                                                                                                                                                                                  | V <sub>DC</sub>   | 35                        | 45        | 50                           | 60        | Volts |
| Maximum average forward rectified current at T <sub>C</sub> =135°C                                                                                                                                                                           | I <sub>(AV)</sub> | 20.0                      |           |                              |           | Amps  |
| Peak repetitive forward current per leg at T <sub>C</sub> =135°C (rated V <sub>R</sub> , sq. wave 2.0 KHz)                                                                                                                                   | I <sub>FRM</sub>  | 20.0                      |           |                              |           | Amps  |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)                                                                                                                                             | I <sub>FSM</sub>  | 150.0                     |           |                              |           | Amps  |
| Peak repetitive reverse surge current (NOTE 1)                                                                                                                                                                                               | I <sub>RRM</sub>  | 1.0                       |           | 0.5                          |           | Amps  |
| Maximum instantaneous forward voltage per leg at I <sub>F</sub> =10A, T <sub>C</sub> =25°C<br>(NOTE 2) I <sub>F</sub> =10A, T <sub>C</sub> =125°C<br>I <sub>F</sub> =20A, T <sub>C</sub> =25°C<br>I <sub>F</sub> =20A, T <sub>C</sub> =125°C | V <sub>F</sub>    | —<br>0.57<br>0.84<br>0.72 |           | 0.80<br>0.70<br>0.95<br>0.85 |           | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage per leg T <sub>C</sub> =25°C<br>T <sub>C</sub> =125°C                                                                                                                     | I <sub>R</sub>    | 0.1<br>15.0               |           | 0.15<br>150.0                |           | mA    |
| Voltage rate of change. (rated V <sub>R</sub> )                                                                                                                                                                                              | dv/dt             | 10,000                    |           |                              |           | V/μs  |
| Typical thermal resistance per leg (NOTE 3)                                                                                                                                                                                                  | R <sub>θJC</sub>  | 2.0                       |           |                              |           | °C/W  |
| Operating junction temperature range                                                                                                                                                                                                         | T <sub>J</sub>    | -65 to +150               |           |                              |           | °C    |
| Storage temperature range                                                                                                                                                                                                                    | T <sub>STG</sub>  | -65 to +175               |           |                              |           | °C    |

#### NOTES:

(1) 2.0 $\mu\text{s}$  pulse width,  $f=1.0\text{KHz}$

(2) Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle

(3) Thermal resistance from junction to case per leg

# RATINGS AND CHARACTERISTIC CURVES MBR2035CT THRU MBR2060CT

