

Schottky Barrier Rectifier

MBR3045WT

FEATURES

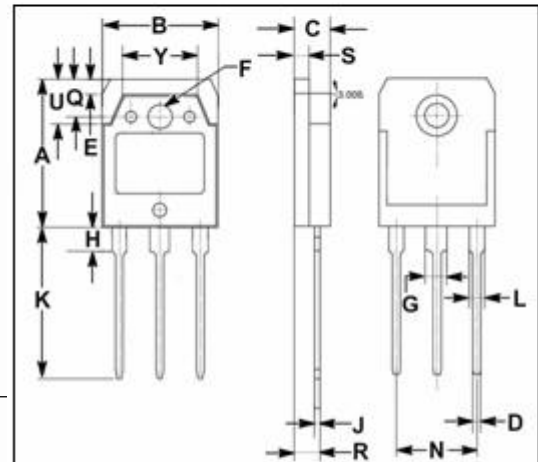
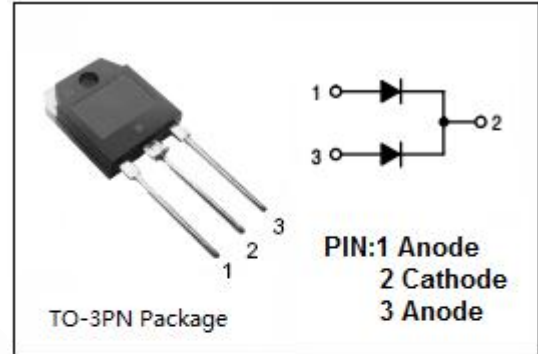
- Dual diode construction; terminals 1 and 3 may be connected for parallel operation at full rating
- Low forward voltage
- Guarding for stress protection
- 150°C operating junction temperature
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

MECHANICAL CHARACTERISTICS

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------------------------|--|----------|------------|
| V_{RRM} V_{RWM} V_R | Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | 45 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current (Per Leg) (Total) | 15 30 | A |
| I_{FSM} | Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method) | 200 | A |
| I_{RRM} | Peak Repetitive Reverse Surge Current (2.0 μ s, 1.0kHz) | 2.0 | A |
| T_J | Junction Temperature | -65~175 | °C |
| T_{stg} | Storage Temperature Range | -65~175 | °C |
| dv/dt | Voltage Rate of Change (Rated V_R) | 10,000 | V/ μ s |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 19.60 | 20.30 |
| B | 15.50 | 15.70 |
| C | 4.70 | 4.90 |
| D | 0.90 | 1.10 |
| E | 1.90 | 2.10 |
| F | 3.40 | 3.60 |
| G | 2.90 | 3.20 |
| H | 3.20 | 3.40 |
| J | 0.595 | 0.605 |
| K | 19.80 | 20.70 |
| L | 1.90 | 2.20 |
| N | 10.89 | 10.91 |
| Q | 4.90 | 5.10 |
| R | 3.35 | 3.45 |
| S | 1.995 | 2.100 |
| U | 5.90 | 6.20 |
| Y | 9.90 | 10.10 |

Schottky Barrier Rectifier**MBR3045WT****THERMAL CHARACTERISTICS**

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|---|-----|------|
| R _{th j-c} | Thermal Resistance, Junction to Case | 1.4 | °C/W |
| R _{th j-a} | Thermal Resistance, Junction to Ambient | 40 | °C/W |

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 1%)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|----------------|---------------------------------------|---|----------------------|------|
| V _F | Maximum Instantaneous Forward Voltage | I _F = 20A, T _C = 125°C I _F = 30A, T _C = 25°C I _F = 30A, T _C = 125°C | 0.60 0.76 0.72 | V |
| I _R | Maximum Instantaneous Reverse Current | Rated DC Voltage, T _C = 25°C Rated DC Voltage, T _C = 125°C | 0.1 10 | mA |