



Micro Commercial Components

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MBR545F

5 Amp Schottky Barrier Rectifier 45 Volts

Features

- Low Forward Voltage Drop
- High frequency properties and switching speed
- High Current Capability
- Guard Ring for over-voltage protection
- Case Material : Molded plastic UL Flammability Classification Rating 94V-0

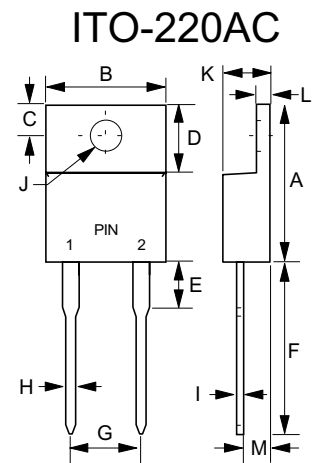
Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance, Rthjc : 4.5°C/W

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR545F | MBR545F | 45V | 31.5V | 45V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|----------------|---|
| Average Forward Current | $I_{F(AV)}$ | 5 A | $T_C = 120^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 80A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 0.55V 0.49V | $I_F = 5A; T_C = 25^\circ\text{C}$ $I_F = 5A; T_C = 125^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 1mA 40mA | $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$ |



| DIM | DIMENSIONS | | | |
|-----|------------|------|-------|-------|
| | INCHES | | MM | |
| | MIN | MAX | MIN | MAX |
| A | .583 | .606 | 14.80 | 15.40 |
| B | --- | .406 | --- | 10.30 |
| C | .100 | .112 | 2.55 | 2.85 |
| D | .248 | .272 | 6.30 | 6.90 |
| E | --- | .161 | --- | 4.10 |
| F | .512 | .543 | 13.00 | 13.80 |
| G | .200 | | 5.10 | |
| H | --- | .035 | --- | 0.90 |
| I | --- | .032 | --- | 0.80 |
| J | .118 | .134 | 3.00 | 3.40 |
| K | --- | .189 | --- | 4.80 |
| L | --- | .123 | --- | 3.10 |
| M | .098 | .114 | 2.50 | 2.90 |

MBR545F

Typical Characteristics

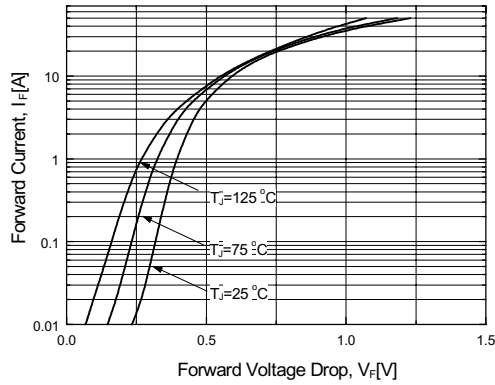


Figure 1. Typical Forward Voltage Characteristics

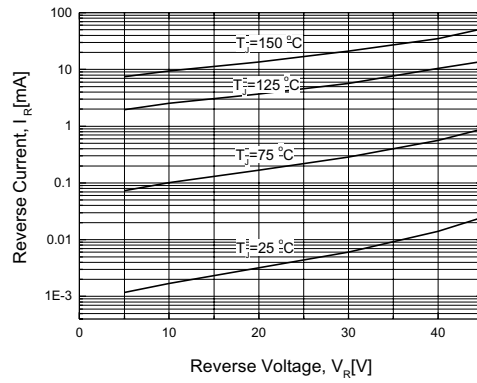


Figure 2. Typical Reverse Current vs. Reverse Voltage

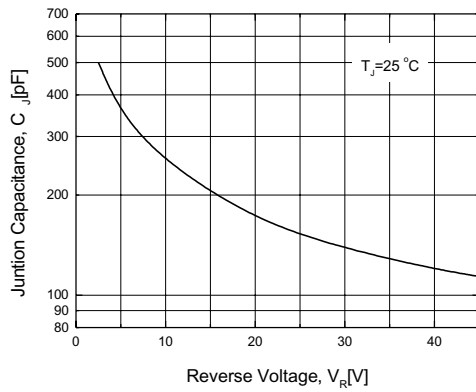


Figure 3. Typical Junction Capacitance

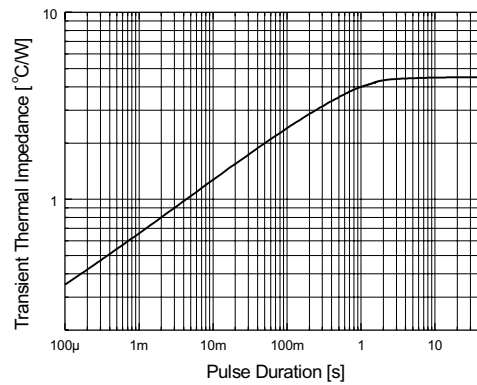


Figure 4. Thermal Impedance Characteristics

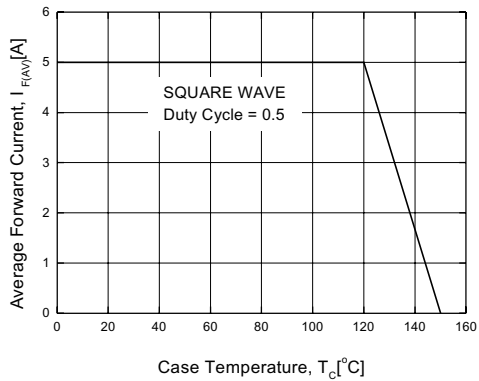


Figure 5. Forward Current Derating Curve

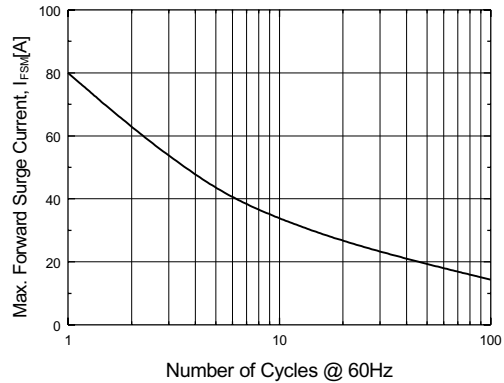


Figure 6. Non-Repetitive Surge Current



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