

Silicon Schottky Diode, 500A

Features

- Guard Ring Protection
- Low forward voltage drop
- High surge current capability
- Up to 100V V_{RRM}


TWIN TOWER PACKAGE

Maximum Ratings ($T_J = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Conditions | MBR50045CT (R) | MBR50060CT (R) | MBR50080CT (R) | MBR500100C T(R) | Units |
|--|-------------|---|-------------------|-------------------|-------------------|--------------------|-------|
| Repetitive peak reverse voltage | V_{RRM} | | 45 | 60 | 80 | 100 | V |
| RMS reverse voltage | V_{RMS} | | 32 | 42 | 56 | 70 | V |
| DC blocking voltage | V_{DC} | | 45 | 60 | 80 | 100 | V |
| Average forward current | $I_{F(AV)}$ | $T_C \leq 100^\circ\text{C}$ | 500 | 500 | 500 | 500 | A |
| Non-repetitive forward surge current, half sine-wave | I_{FSM} | $T_C = 25^\circ\text{C}$ $t_p = 8.3\text{ ms}$ | 3500 | 3500 | 3500 | 3500 | A |

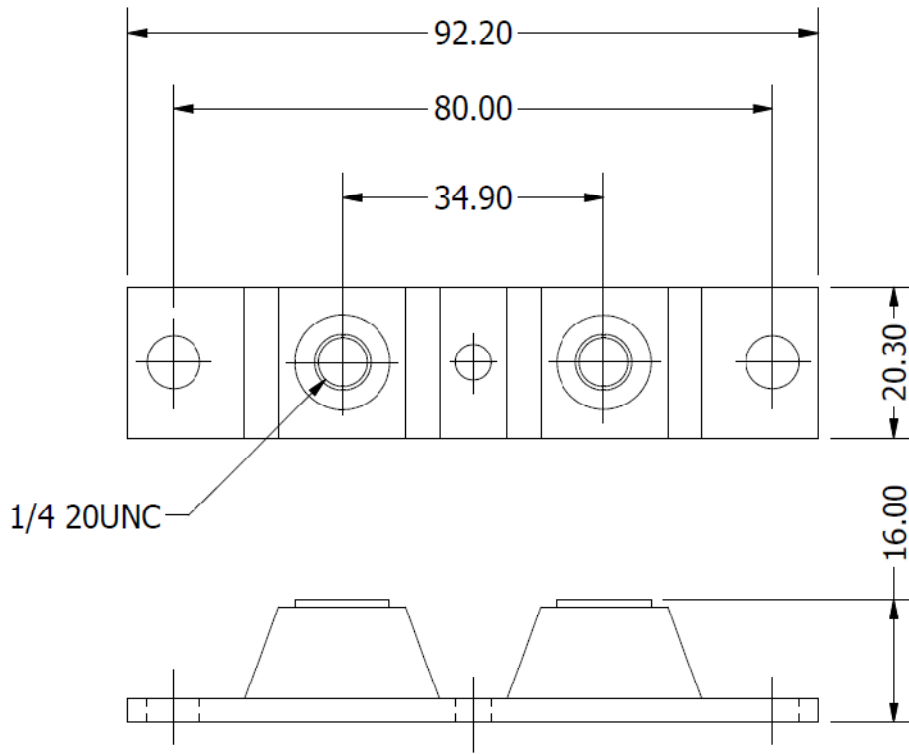
Electrical Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Conditions | MBR50045CT (R) | MBR50060CT (R) | MBR50080CT (R) | MBR500100C T(R) | Units |
|--------------------|--------|--|-------------------|-------------------|-------------------|--------------------|-------|
| DC forward voltage | V_F | $I_F = 250\text{ A}$ $T_J = 25^\circ\text{C}$ | 0.75 | 0.85 | 0.88 | 0.88 | V |
| DC reverse current | I_R | $V_R = 20\text{ V}$ $T_J = 25^\circ\text{C}$ | 1 | 1 | 1 | 1 | mA |
| | | $V_R = 20\text{ V}$ $T_J = 125^\circ\text{C}$ | 20 | 20 | 20 | 20 | |

Thermal Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | | MBR50045CT (R) | MBR50060CT (R) | MBR50080CT (R) | MBR500100C T(R) | Units |
|--------------------------------------|----------------|--|-------------------|-------------------|-------------------|--------------------|---------------------------|
| Thermal resistance junction to case | R_{th-j-c} | | 0.12 | 0.12 | 0.12 | 0.12 | $^\circ\text{C}/\text{W}$ |
| Operating, storage temperature range | T_J, T_{stg} | | - 40 to +165 | - 40 to +165 | - 40 to +165 | - 40 to +165 | $^\circ\text{C}$ |

Package Outline



ALL DIMENSIONS IN MM

Ordering Table

| <i>MBR</i> | <i>500</i> | <i>45</i> | <i>CT</i> |
|------------|------------|-----------|-----------|
| 1 | 2 | 3 | 4 |

- 1 – Device Type
 - > MBR = Schottky Barrier Diode Module
- 2 – Current Rating = $I_{F(AV)}$
- 3 – Voltage = V_{RRM}
- 4 – Polarity
 - > CT = Normal (Cathode to Base)
 - > CTR = Reverse (Anode to Base)