

## Silicon Schottky Diode, 400A

### 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  | MBR40020CT (R) | MBR40030CT (R) | MBR40035CT (R) | MBR40040CT (R) | Units |
|--|-------------|---|----------------|----------------|----------------|----------------|-------|
| Repetitive peak reverse voltage                      | $V_{RRM}$   |   | 20             | 30             | 35             | 40             | V     |
| RMS reverse voltage                                  | $V_{RMS}$   |   | 14             | 21             | 25             | 28             | V     |
| DC blocking voltage                                  | $V_{DC}$    |   | 20             | 30             | 35             | 40             | V     |
| Average forward current                              | $I_{F(AV)}$ | $T_C \leq 125^\circ\text{C}$                      | 400            | 400            | 400            | 400            | A     |
| Non-repetitive forward surge current, half sine-wave | $I_{FSM}$   | $T_C = 25^\circ\text{C}$<br>$t_p = 8.3\text{ ms}$ | 3000           | 3000           | 3000           | 3000           | A     |

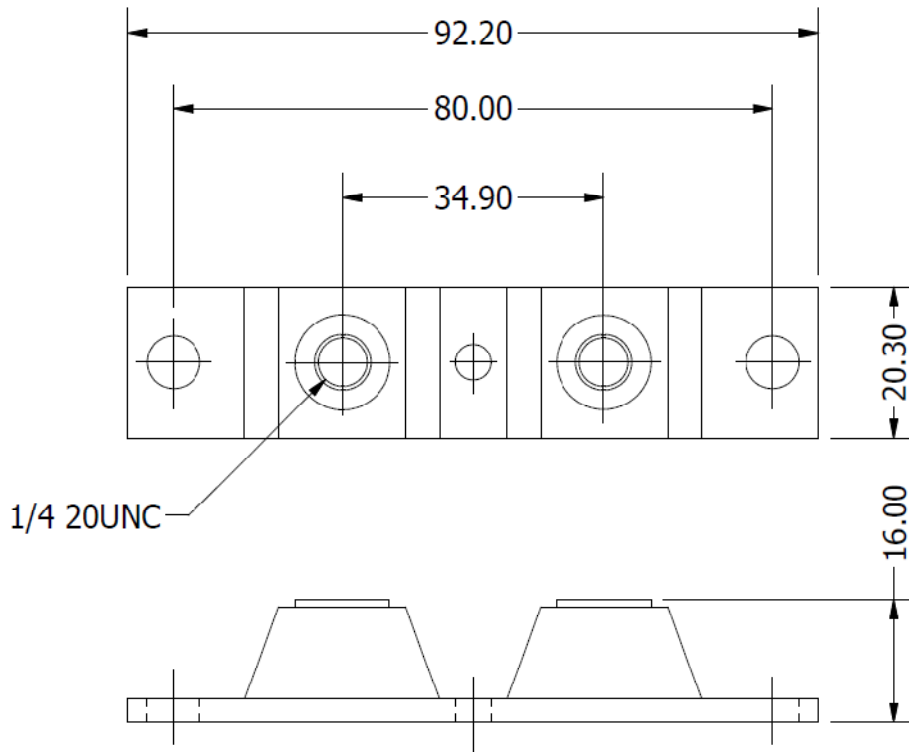
### Electrical Characteristics ( $T_J = 25^\circ\text{C}$ unless otherwise specified)

| Parameter          | Symbol | Conditions                                       | MBR40020CT (R) | MBR40030CT (R) | MBR40035CT (R) | MBR40040CT (R) | Units |
|--------------------|--------|--|----------------|----------------|----------------|----------------|-------|
| DC forward voltage | $V_F$  | $I_F = 200\text{ A}$<br>$T_J = 25^\circ\text{C}$ | 0.68           | 0.68           | 0.68           | 0.68           | V     |
| DC reverse current | $I_R$  | $V_R = 20\text{ V}$<br>$T_J = 25^\circ\text{C}$  | 5              | 5              | 5              | 5              | mA    |
|                    |        | $V_R = 20\text{ V}$<br>$T_J = 125^\circ\text{C}$ | 200            | 200            | 200            | 200            |       |

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

| Parameter                            | Symbol         |  | MBR40020CT (R) | MBR40030CT (R) | MBR40035CT (R) | MBR40040CT (R) | Units                     |
|--------------------------------------|----------------|--|----------------|----------------|----------------|----------------|---------------------------|
| Thermal resistance junction to case  | $R_{thj-c}$    |  | 0.35           | 0.35           | 0.35           | 0.35           | $^\circ\text{C}/\text{W}$ |
| Operating, storage temperature range | $T_J, T_{stg}$ |  | - 40 to +175   | - 40 to +175   | - 40 to +175   | - 40 to +175   | $^\circ\text{C}$          |

**Package Outline**



ALL DIMENSIONS IN MM

**Ordering Table**

| <i>MBR</i> | <i>400</i> | <i>20</i> | <i>CT</i> |
|------------|------------|-----------|-----------|
| <b>1</b>   | <b>2</b>   | <b>3</b>  | <b>4</b>  |

- 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)