

## Silicon Carbide Schottky Diode, 650V / 6A

### Features

- Negligible reverse recovery
- High surge current
- Positive temperature coefficient
- Higher frequency
- Halogen-free / RoHS compliant

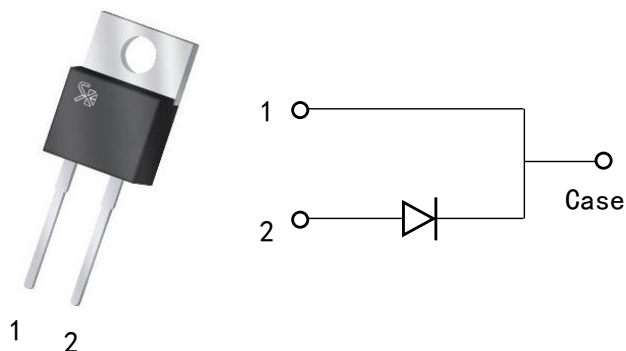
|           |               |
|-----------|---------------|
| $V_{RRM}$ | 650V          |
| $I_F$     | 6A (TC=153°C) |

### Applications

- SMPS
- Solar inverter
- Data Center
- UPS

### Benefits

- High-speed switching
- Low heat dissipation requirements
- Reduce size and cost of the system
- High-reliability



| Marking   | Package  |
|-----------|----------|
| SSC0665-T | TO-220-2 |

## Maximum Ratings (Tc=25°C unless otherwise noted)

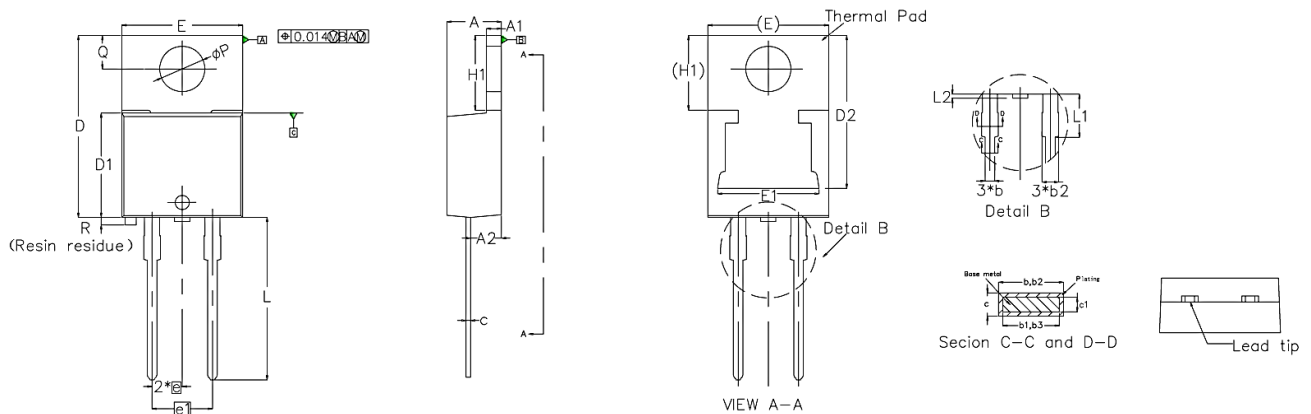
| Symbol    | Parameter                             |                                       | Value | Unit | Note |
|-----------|---------------------------------------|---------------------------------------|-------|------|------|
| $V_{RRM}$ | Repetitive peak reverse voltage       |                                       | 650   | V    |      |
| $I_F$     | Continuous forward current            | Tc=153°C                              | 6     | A    |      |
| $I_{FSM}$ | Non-repetitive forward surge current  | Tc=25°C, $t_p=10ms$ , Half sine pulse | 66    | A    |      |
| $I_{FRM}$ | Repetitive Peak Forward Surge Current | Tc=25°C, $t_p=10ms$ , Half sine pulse | 60    | A    |      |

## Electrical Characteristics (Tc=25°C unless otherwise noted)

| Symbol   | Parameter           | Test Conditions      | Value |      |      | Unit    | Note |
|----------|---------------------|----------------------|-------|------|------|---------|------|
|          |                     |                      | Min.  | Typ. | Max. |         |      |
| $V_{DC}$ | DC blocking voltage | $I_R=50\mu A$        | 650   | -    | -    | V       |      |
| $V_F$    | Forward voltage     | $I_F=6A$             | -     | 1.34 | 1.5  | V       |      |
| $I_R$    | Reverse current     | $V_R=650V$ , Tc=25°C | -     | 1.2  | 50   | $\mu A$ |      |

## Package Dimensions

### To-220-2



| SYMBOL | MILLIMETERS |       |       | NOTES |  | SYMBOL   | MILLIMETERS |       |       | NOTES |
|--------|-------------|-------|-------|-------|--|----------|-------------|-------|-------|-------|
|        | Normal      | MIN.  | MAX.  |       |  |          | Normal      | MIN.  | MAX.  |       |
| A      | 4.55        | 4.44  | 4.65  |       |  | E1       | 8.57        | 8.25  | 8.89  |       |
| A1     | 1.27        | 1.14  | 1.39  |       |  | e        | 2.54        | 2.41  | 2.67  |       |
| A2     | 2.60        | 2.54  | 2.79  |       |  | e1       | 5.08        | 4.95  | 5.20  |       |
| b      | 0.85        | 0.69  | 0.94  |       |  | H1       | 6.20        | 6.09  | 6.40  |       |
| b1     | 0.83        | 0.38  | 0.97  |       |  | L        | 13.60       | 13.52 | 14.00 |       |
| b2     | 1.33        | 1.20  | 1.45  |       |  | L1       | 3.60        | 3.56  | 3.80  |       |
| b3     | 1.33        | 1.20  | 1.45  |       |  | L2       | —           | 0     | 0.35  |       |
| c      | 0.50        | 0.36  | 0.56  |       |  | $\phi P$ | 3.80        | 3.70  | 3.91  |       |
| c1     | 0.48        | 0.36  | 0.56  |       |  | Q        | 2.80        | 2.62  | 2.87  |       |
| D      | 15.25       | 14.95 | 15.32 |       |  | R        |             |       | 0.2   |       |
| D1     | 8.75        | 8.50  | 8.89  |       |  |          |             |       |       |       |
| D2     | 12.85       | 12.20 | 13.30 |       |  |          |             |       |       |       |
| E      | 10.18       | 10.11 | 10.40 |       |  |          |             |       |       |       |