

Features

- Silicon Carbide Schottky Barrier Diode
- Low V_f
- Low I_R
- High-Recovery Speed

Applications

- Switch mode power supplies
- Power Factor Correction
- Secondary Side Rectification
- PV Power Conditioners

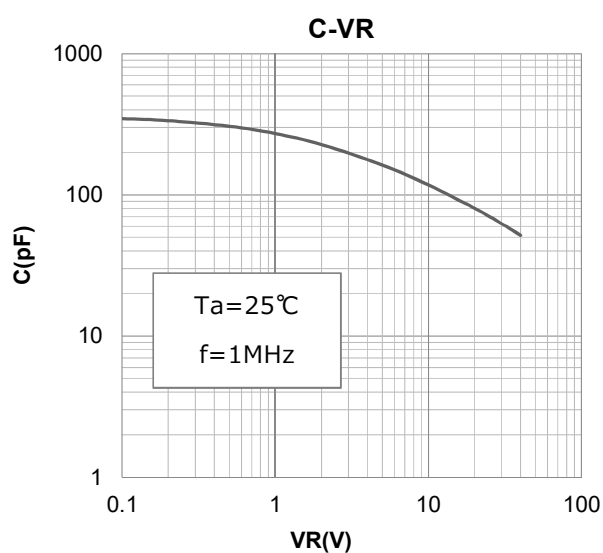
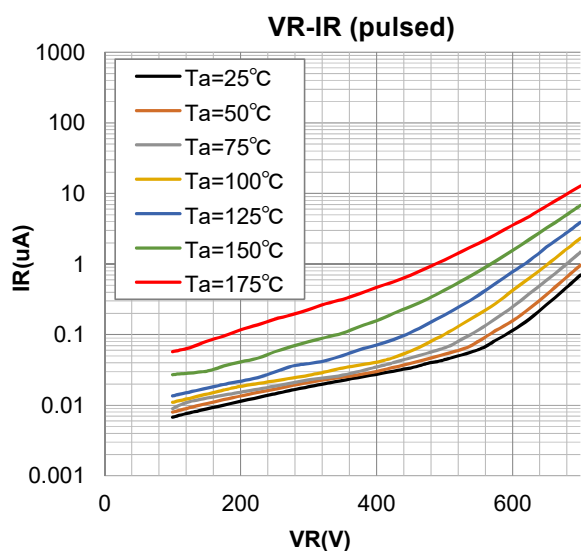
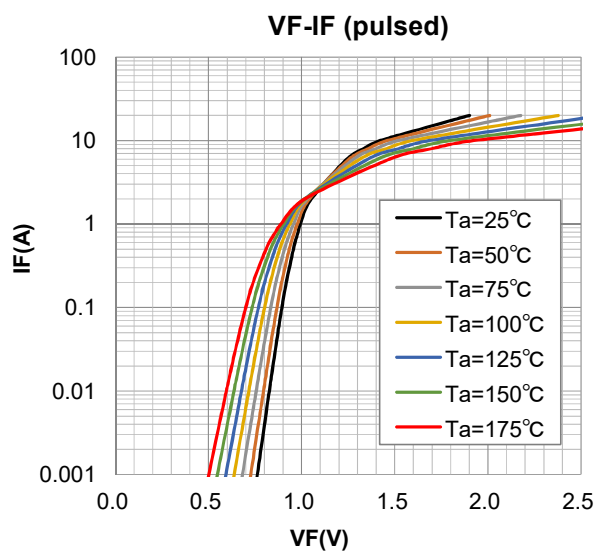
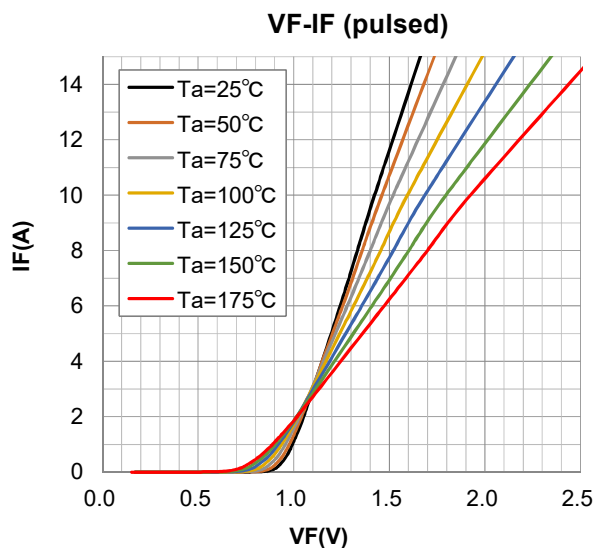
Maximim Ratings ($T_a=25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Limit | Unit |
|-------------------------------------|-----------|-----------------|-------------|------------------|
| Repetitive peak reverse voltage | V_{RM} | | 650 | V |
| Reverse voltage (DC) | V_R | | 650 | V |
| Forward current (DC) | I_F | | 8 | A |
| Surge no repetitive forward current | I_{FSM} | 10ms Sinusoidal | 65 | A |
| Junction temperature | T_j | | 175 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -55 to +175 | $^\circ\text{C}$ |

Electrical Characteristics ($T_a=25^\circ\text{C}$)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------|----------|--|------|------|------|---------------|
| DC blocking voltage | V_{DC} | $I_R=40\mu\text{A}$ | 650 | - | - | V |
| Forward voltage | V_F | $I_F=8\text{A}, T_a=25^\circ\text{C}$ | - | 1.33 | 1.70 | V |
| | | $I_F=8\text{A}, T_a=150^\circ\text{C}$ | - | 1.60 | - | V |
| | | $I_F=8\text{A}, T_a=175^\circ\text{C}$ | - | 1.70 | - | V |
| Reverse current | I_R | $V_R=650\text{V}, T_a=25^\circ\text{C}$ | - | 0.3 | 40 | μA |
| | | $V_R=650\text{V}, T_a=150^\circ\text{C}$ | - | 3 | - | μA |
| | | $V_R=650\text{V}, T_a=175^\circ\text{C}$ | - | 7 | - | μA |
| Total capacitance | C | $V_R=1\text{V}, f=1\text{MHz}$ | - | 272 | - | pF |
| Total capacitive charge | Q_C | $V_R=400\text{V}, di/dt=350\text{A}/\mu\text{s}$ | - | 21 | - | nC |
| Switching time | t_c | $V_R=400\text{V}, di/dt=350\text{A}/\mu\text{s}$ | - | 15 | - | nS |

Electrical Characteristics curves



NOTE

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- 2) Please request for the specification sheet before use.
- 3) Since the products are in wafer form, the values in this document are for reference only.
- 4) Although we strive to improve the quality of our products, they may malfunction or fail. When using this product, please implement a safety design suitable for the system within your responsibility.
- 5) Although this document has been prepared with great care, we assume no responsibility for any damages incurred due to errors in the provided information.
- 6) If the operating environment (e.g., high temperature, high voltage, high current) is severe, the reverse current may become excessively large and the device may be destroyed due to the increased reverse
- 7) The absolute maximum ratings must not be exceeded even momentarily. Do not exceed the absolute maximum ratings for any of the multiple ratings.
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