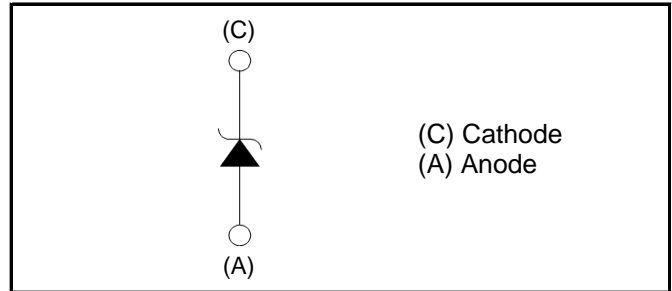


|       |                  |
|-------|------------------|
| $V_R$ | 1200V            |
| $I_F$ | 5A* <sup>1</sup> |
| $Q_C$ | 17nC             |

●Features

- 1) Shorter recovery time
- 2) Reduced temperature dependence
- 3) High-speed switching possible

●Inner circuit



●Construction

Silicon carbide epitaxial planer type

Schottky diode

●Absolute maximum ratings (T<sub>j</sub> = 25°C)

| Parameter                           | Symbol           | Value            | Unit |
|-------------------------------------|------------------|------------------|------|
| Reverse voltage (repetitive peak)   | $V_{RM}$         | 1200             | V    |
| Reverse voltage (DC)                | $V_R$            | 1200             | V    |
| Continuous forward current          | $I_F$            | 5* <sup>1</sup>  | A    |
| Surge no repetitive forward current | $I_{FSM}$        | 23* <sup>2</sup> | A    |
|                                     |                  | 87* <sup>3</sup> | A    |
|                                     |                  | 18* <sup>4</sup> | A    |
| Repetitive peak forward current     | $I_{FRM}$        | 25* <sup>5</sup> | A    |
| Junction temperature                | T <sub>j</sub>   | 175              | °C   |
| Range of storage temperature        | T <sub>stg</sub> | -55 to +175      | °C   |

\*1 Limited by T<sub>j</sub> \*2 PW=8.3ms sinusoidal, T<sub>j</sub>=25°C \*3 PW=10μs square, T<sub>j</sub>=25°C

\*4 PW=8.3ms sinusoidal, T<sub>j</sub>=150°C \*5 Duty cycle=10%, limited by T<sub>j</sub>

**●Electrical characteristics (T<sub>j</sub> = 25°C)**

| Parameter               | Symbol          | Conditions                                   | Values |      |      | Unit |
|-------------------------|-----------------|--|--------|------|------|------|
|                         |                 |  | Min.   | Typ. | Max. |      |
| DC blocking voltage     | V <sub>DC</sub> | I <sub>R</sub> =0.1mA                        | 1200   | -    | -    | V    |
| Forward voltage         | V <sub>F</sub>  | I <sub>F</sub> =5A, T <sub>j</sub> =25°C     | -      | 1.4  | 1.6  | V    |
|                         |                 | I <sub>F</sub> =5A, T <sub>j</sub> =150°C    | -      | 1.8  | -    | V    |
|                         |                 | I <sub>F</sub> =5A, T <sub>j</sub> =175°C    | -      | 1.9  | -    | V    |
| Reverse current         | I <sub>R</sub>  | V <sub>R</sub> =1200V, T <sub>j</sub> =25°C  | -      | 5    | 100  | μA   |
|                         |                 | V <sub>R</sub> =1200V, T <sub>j</sub> =150°C | -      | 40   | -    | μA   |
|                         |                 | V <sub>R</sub> =1200V, T <sub>j</sub> =175°C | -      | 65   | -    | μA   |
| Total capacitance       | C               | V <sub>R</sub> =1V, f=1MHz                   | -      | 270  | -    | pF   |
|                         |                 | V <sub>R</sub> =800V, f=1MHz                 | -      | 21   | -    | pF   |
| Total capacitive charge | Q <sub>C</sub>  | V <sub>R</sub> =800V, di/dt=500A/μs          | -      | 17   | -    | nC   |
| Switching time          | t <sub>c</sub>  | V <sub>R</sub> =800V, di/dt=500A/μs          | -      | 15   | -    | ns   |

●Electrical characteristic curves

Fig.1  $V_F - I_F$  Characteristics

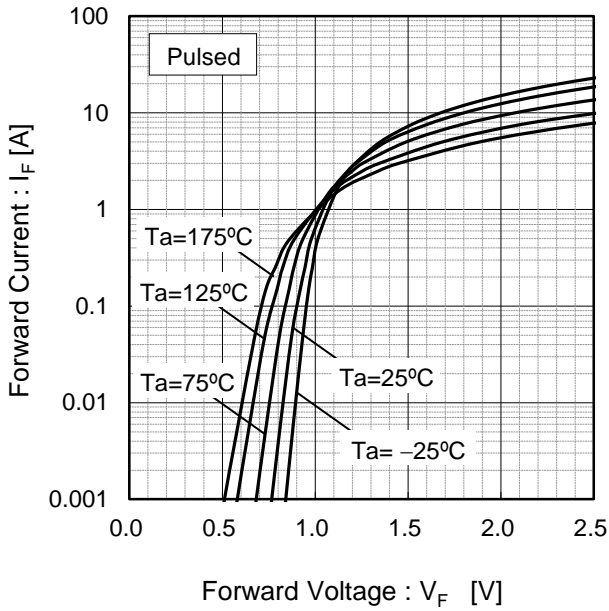


Fig.2  $V_F - I_F$  Characteristics

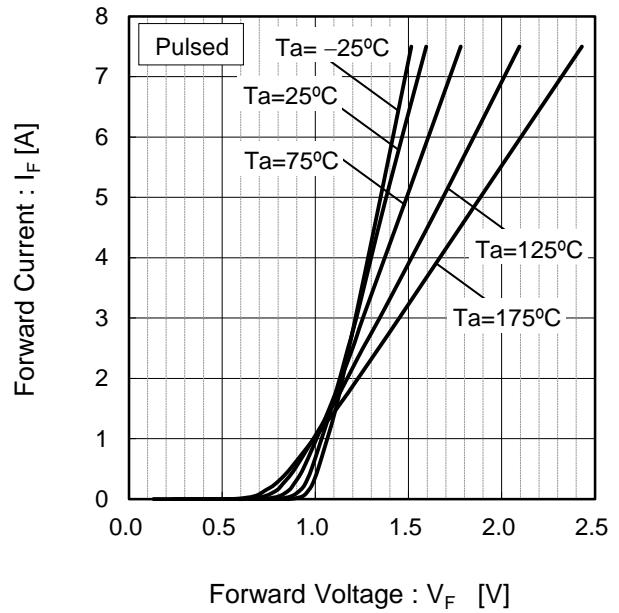


Fig.3  $V_R - I_R$  Characteristics

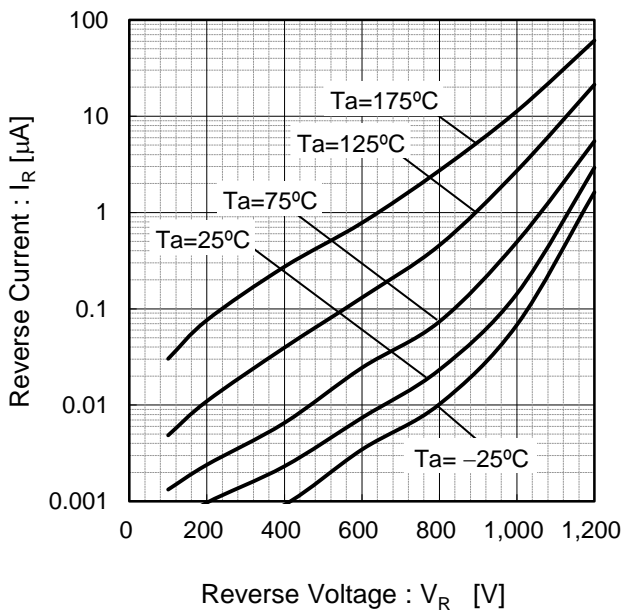
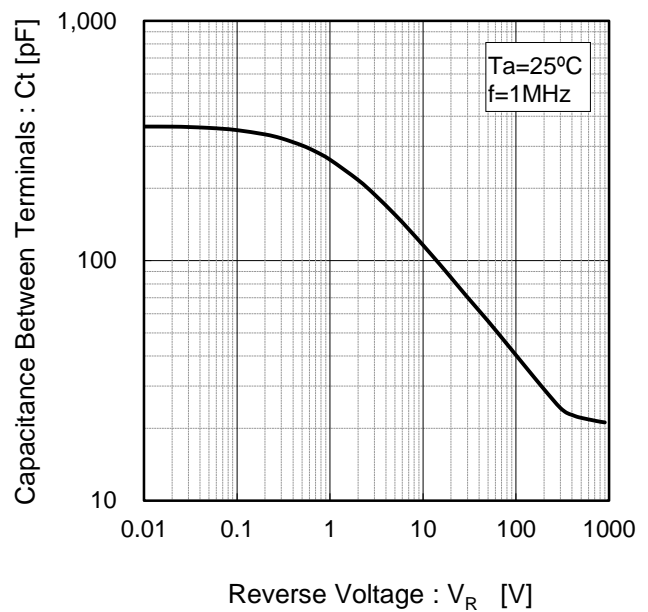


Fig.4  $V_R - C_t$  Characteristics



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