



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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SiC Schottky Barrier Diode

SCS110KE2

● Applications

General rectification

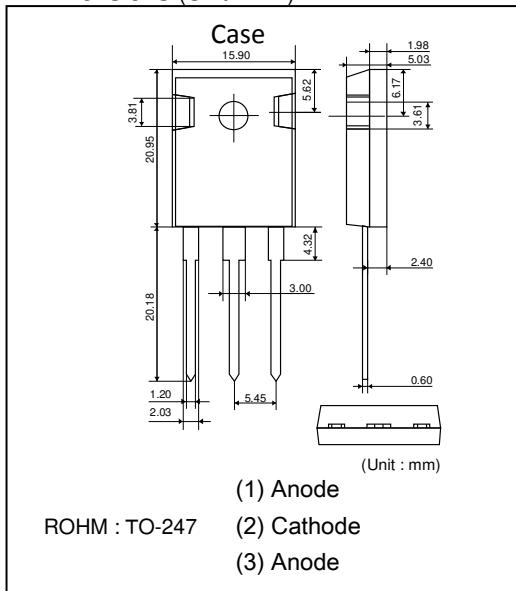
● Features

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

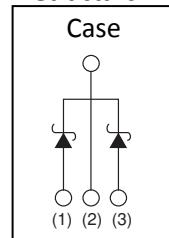
● Construction

Silicon carbide epitaxial planer type

● Dimensions (Unit : mm)



● Structure



● Absolute maximum ratings (Tj=25°C)

| Parameter | Symbol | Limits | Unit |
|---|----------------------|------------------------|--------|
| Reverse voltage (repetitive peak) | V _{RM} | 1200 | V |
| Reverse voltage (DC) | V _R | 1200 | V |
| Continuous forward forward current ^{*6} | I _F | 5 / 10 ^{*1} | A |
| Surge no repetitive forward current ^{*6} | I _{FSM} | 24 / 48 ^{*2} | A |
| | | 97 / 194 ^{*3} | A |
| Repetitive peak forward current ^{*6} | I _{FRM} | 20 / 39 ^{*4} | A |
| Total power dissipation ^{*6} | P _D | 83 / 160 ^{*5} | W |
| Junction temperature | T _j | 175 | °C |
| Range of storage temperature | T _{stg} | -55 to +175 | °C |
| Junction to case ^{*6} | R _{th(j-c)} | 1.8 / 0.93 | °C / W |

(*1)Tc=153°C / 151°C (*2)PW=8.3ms sinusoidal, Tj=25°C

(*3)PW=10μs square, Tj=25°C (*4)Tc=120°C, Tj=150°C, Duty cycle=10% (*5)Tc=25°C (*6)Per Leg / Per Device

● Electrical characteristics (Tj=25°C) [Per Leg]

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-------------------------|-----------------|------|------|------|------|--|
| DC blocking voltage | V _{DC} | 1200 | - | - | V | I _R =0.1mA |
| Forward voltage | V _F | - | 1.50 | 1.75 | V | I _F =5A, T _j =25°C |
| | | - | 2.00 | - | V | I _F =5A, T _j =175°C |
| Reverse current | I _R | - | 5 | 100 | μA | V _R =1200V, T _j =25°C |
| | | - | 60 | - | μA | V _R =1200V, T _j =175°C |
| Total capacitance | C | - | 325 | - | pF | V _R =1V, f=1MHz |
| | | - | 25 | - | pF | V _R =800V, f=1MHz |
| Total capacitive charge | Q _c | - | 20 | - | nC | V _R =800V, di/dt=500A/μs |
| Switching time | t _c | - | 15 | - | ns | V _R =800V, di/dt=500A/μs |

●Electrical characteristic curves (Ta=25°C)

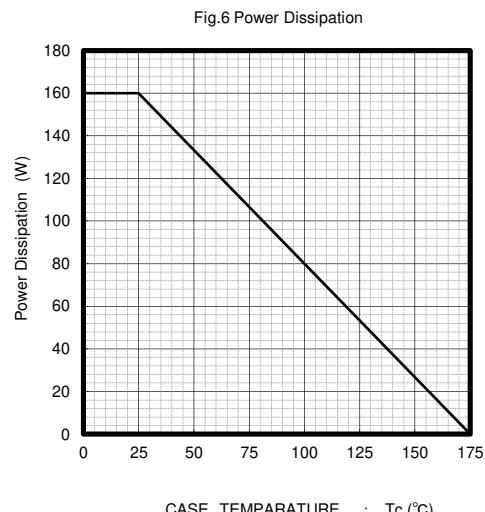
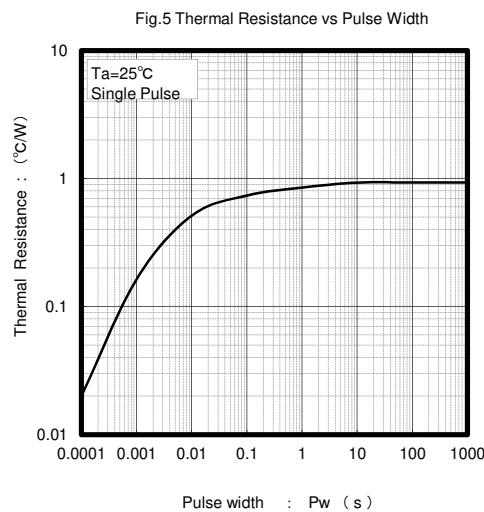
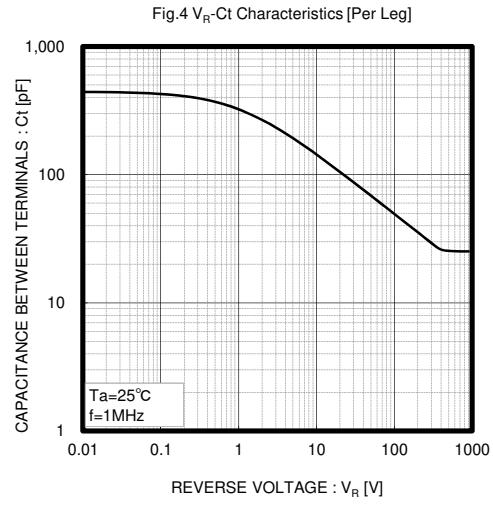
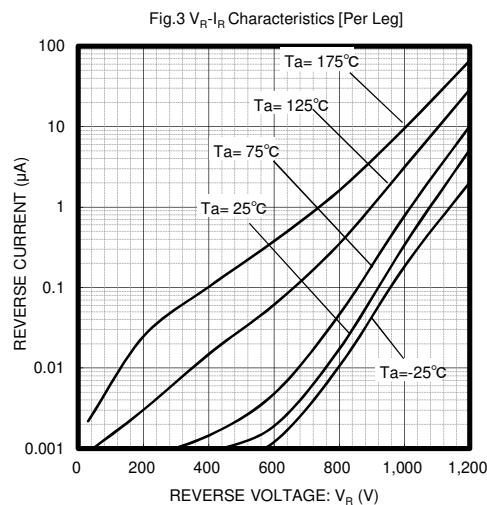
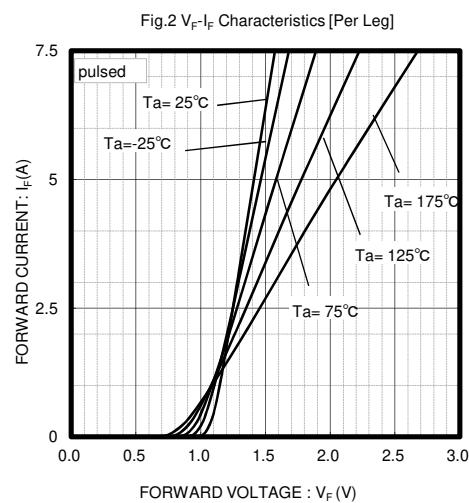
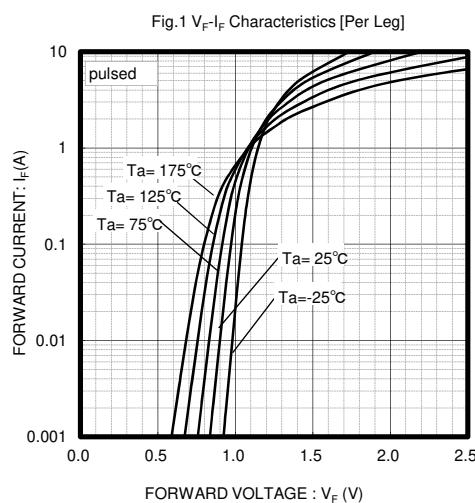


Fig.7 Derating Curve Ip-Tc

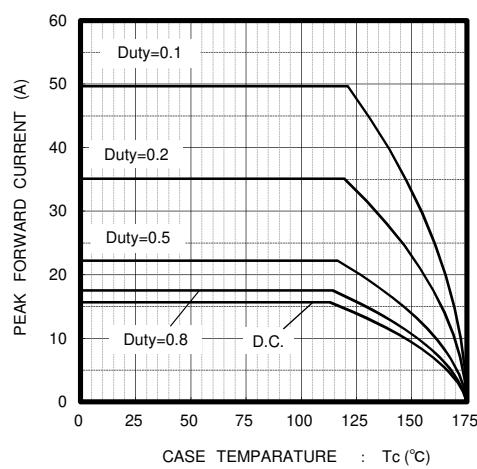
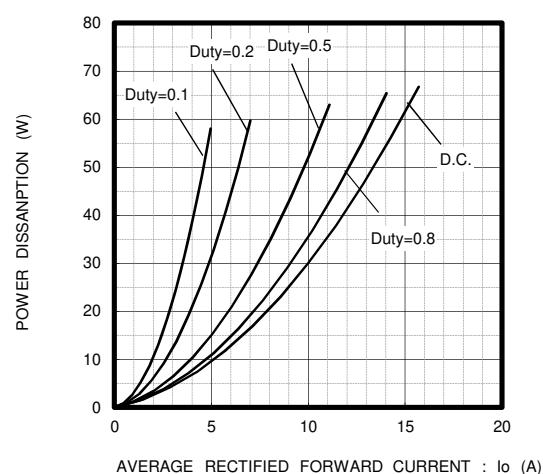


Fig.8 Io-Pf Characteristics



Notes

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