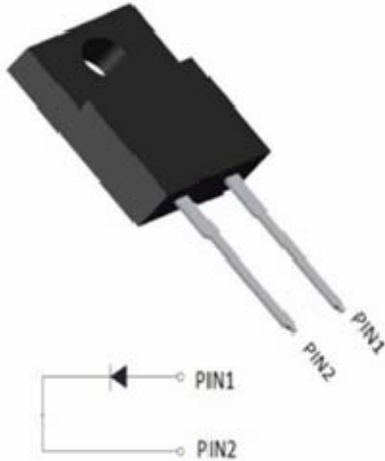


Silicon Carbide Schottky Diode

| | |
|------------|-------|
| V_{RRM} | 1200V |
| I_F 94°C | 10A |
| Q_C | 53nC |



Features

- Positive temperature coefficient
- Temperature-independent switching
- Maximum working temperature at 175 °C
- Unipolar devices and zero reverse recovery current
- Zero forward recovery current
- Essentially no switching losses
- Reduction of heat sink requirements
- High-frequency operation
- Reduction of EMI

Typical Applications

Typical applications are in power factor correction(PFC), solar inverter, uninterruptible power supply, motor drives, photovoltaic inverter, electric car and charger.

Mechanical Data

Package: ITO-220

Terminals: Tin plated leads

Polarity: As marked

Maximum Ratings ($T_c=25$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | VALUE |
|--|----------------|----------------------|-------------|
| Device marking code | | | D112010FQG2 |
| Reverse voltage (repetitive peak) @ $T_j=25^\circ\text{C}$ | V_{RRM} | V | 1200 |
| Reverse voltage (Surge Peak) @ $T_j=25^\circ\text{C}$ | V_{RSM} | V | 1200 |
| Reverse voltage (DC) @ $T_j=25^\circ\text{C}$ | V_{DC} | V | 1200 |
| Continuous forward current @ $T_c=25^\circ\text{C}$ | I_F | A | 14 |
| Continuous forward current @ $T_c=94^\circ\text{C}$ | | | 10 |
| Continuous forward current @ $T_c=135^\circ\text{C}$ | | | 6.8 |
| Non-repetitive peak forward surge current @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$, Half Sine Wave | I_{FSM} | A | 85 |
| Power Dissipation @ $T_c=25^\circ\text{C}$ | P_{TOT} | W | 36 |
| Power Dissipation @ $T_c=110^\circ\text{C}$ | | | 15 |
| i^2t Value @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$ | i^2t | A^2S | 36 |
| Operating junction and Storage temperature range | T_j, T_{stg} | $^\circ\text{C}$ | -55 to +175 |



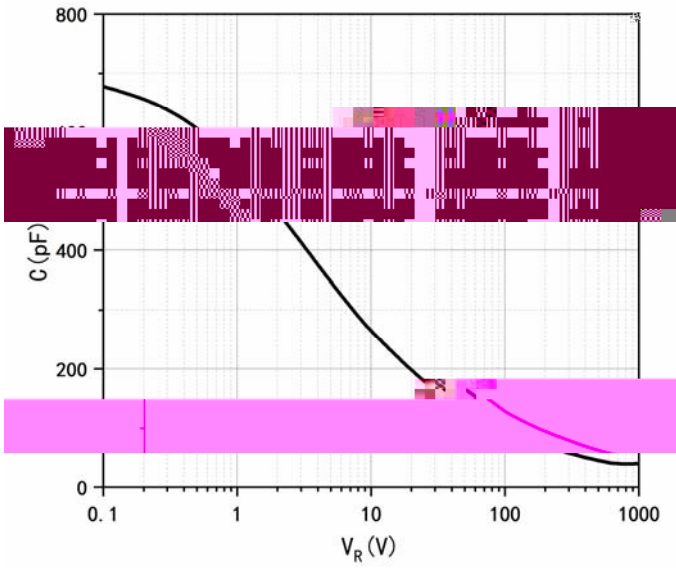


Figure 3. Capacitance vs. Reverse Voltage

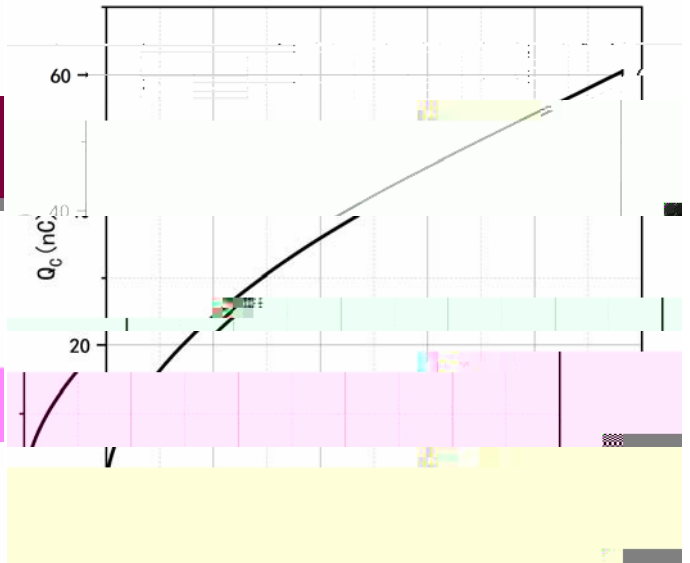


Figure 4. Total Capacitance Charge vs. Reverse Voltage

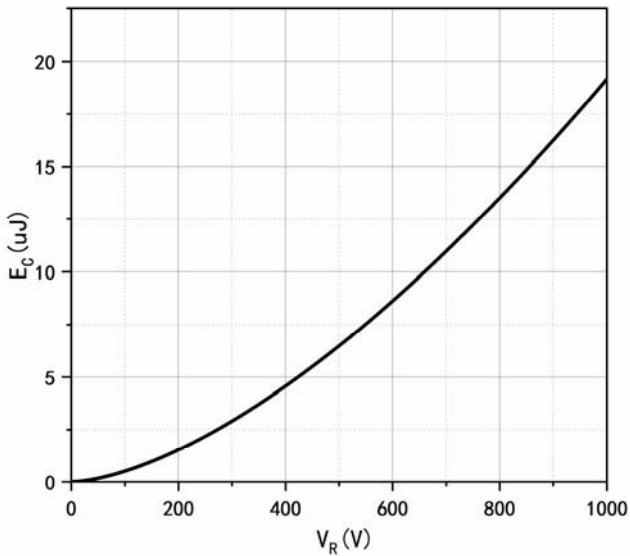


Figure 5. Capacitance Stored Energy

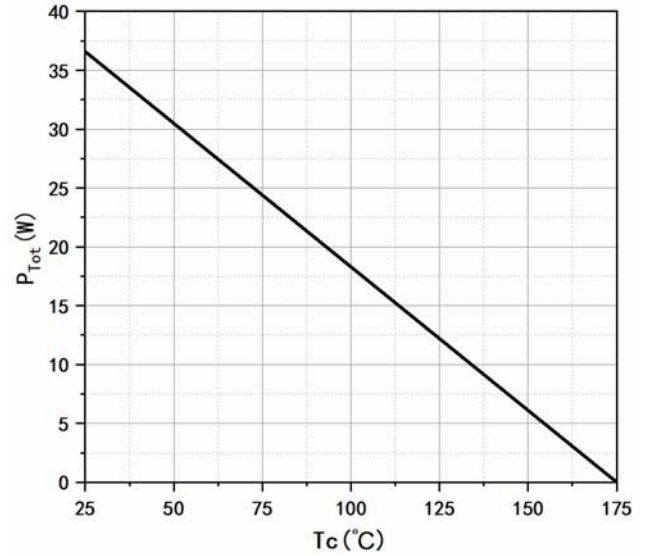


Figure 6. Power Derating

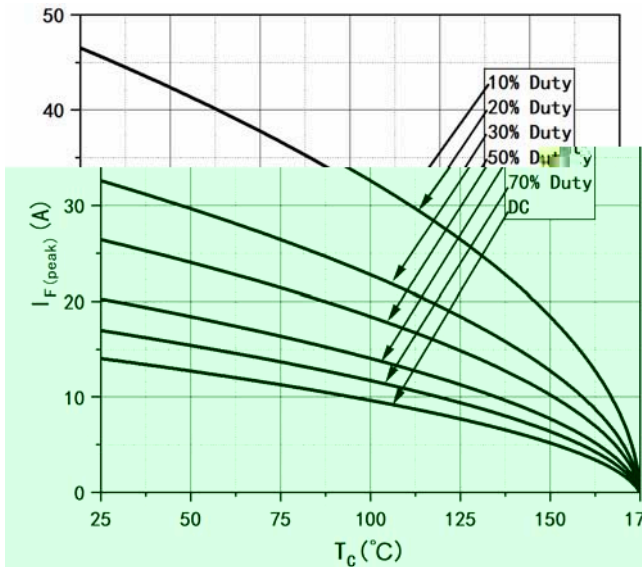


Figure 7. Current Derating

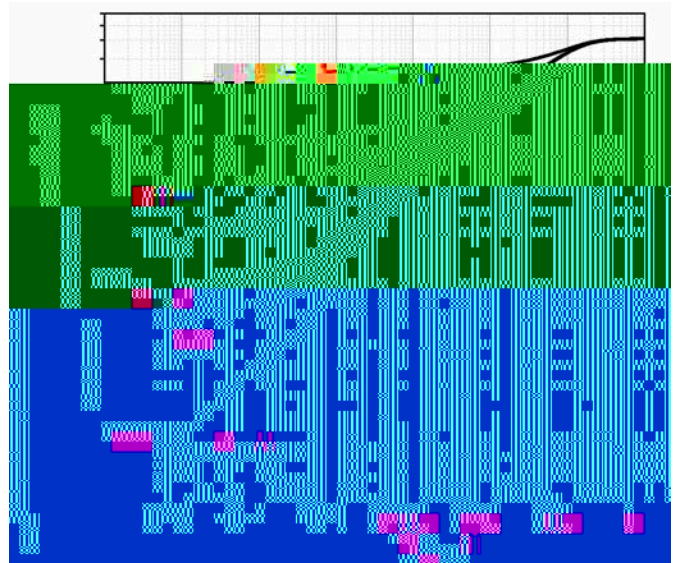
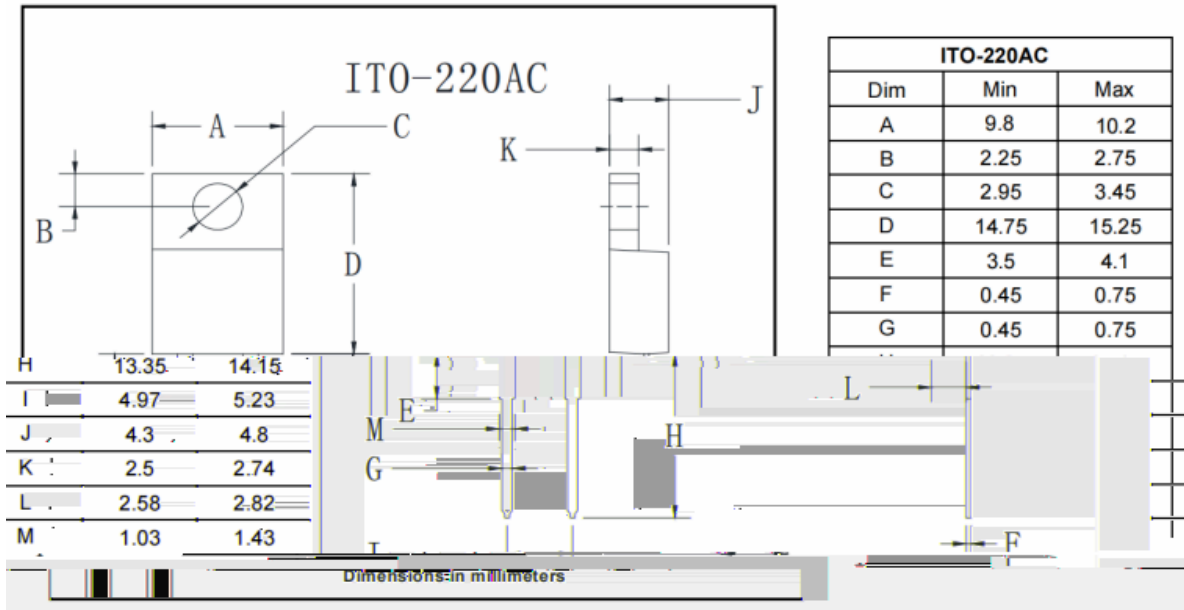


Figure 8. Transient Thermal Impedance



YJD112010FQG2

Outline Dimensions





Disclaimer

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