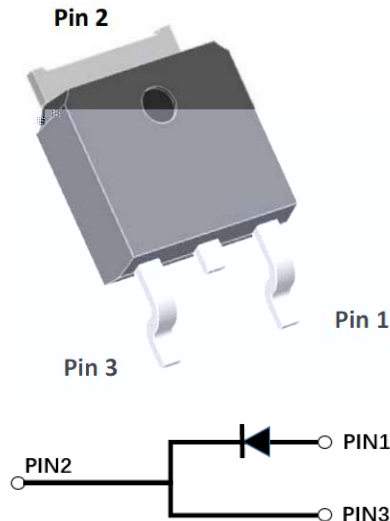


Silicon Carbide Schottky Diode

V_{RRM}	650V
I_F (135°C)	14A
Q_C	30nC



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: TO-252

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

Terminals: Tin plated leads

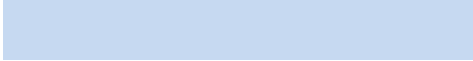
Polarity: As marked

Maximum Ratings ($T_c=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Device marking code			D106510DQG2
Reverse voltage (repetitive peak) @ $T_j=25^\circ\text{C}$	V_{RRM}	V	650
Reverse voltage (Surge Peak) @ $T_j=25^\circ\text{C}$	V_{RSM}	V	650
Reverse voltage (DC) @ $T_j=25^\circ\text{C}$	V_{DC}	V	650
Continuous forward current @ $T_c=25^\circ\text{C}$	I_F	A	30
Continuous forward current @ $T_c=135^\circ\text{C}$			14
Continuous forward current @ $T_c=154^\circ\text{C}$			10
Non-repetitive peak forward surge current @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$, Half Sine Wave	I_{FSM}	A	80
Power Dissipation @ $T_c=25^\circ\text{C}$	P_{TOT}	W	136
Power Dissipation @ $T_c=110^\circ\text{C}$			59
i^2t Value @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$	i^2t	A^2S	32
Operating junction and Storage temperature range	T_j, T_{stg}	$^\circ\text{C}$	-55 to +175



Electrical Characteristics





YJD106510DQG2

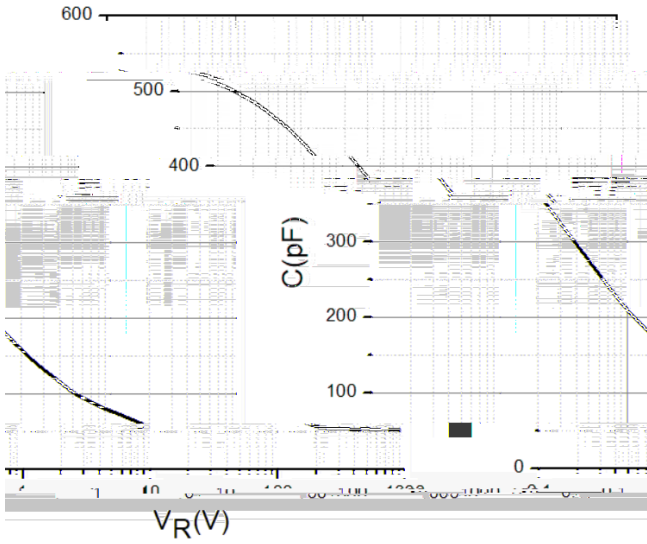


Figure 3. Capacitance vs. Reverse Voltage

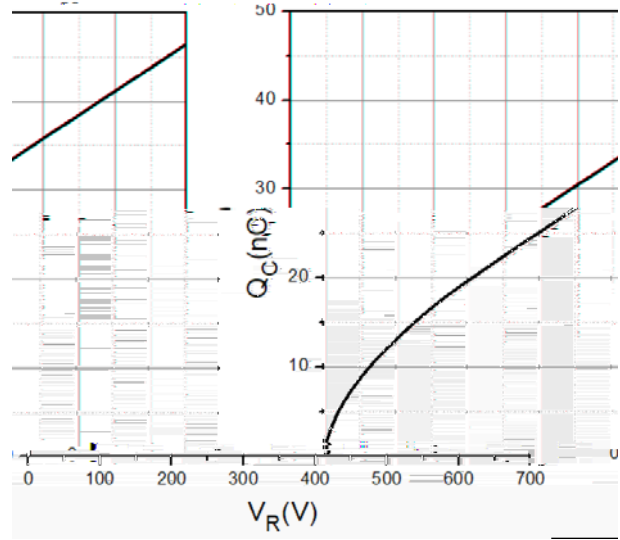


Figure 4. Total Capacitance Charge vs. Reverse Voltage

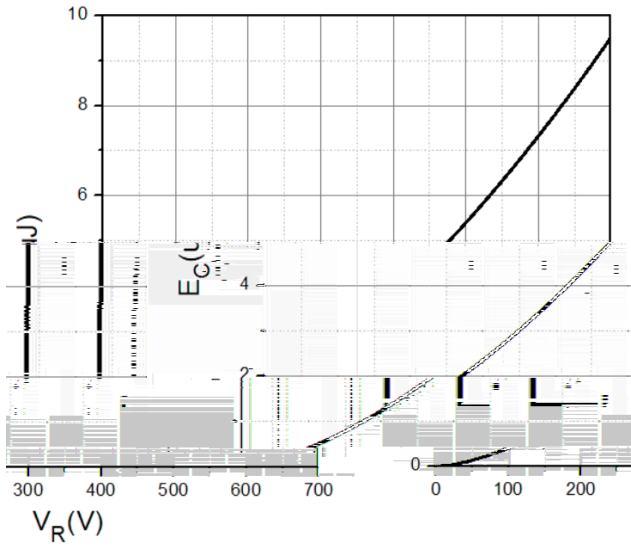


Figure 5. Capacitance Stored Energy

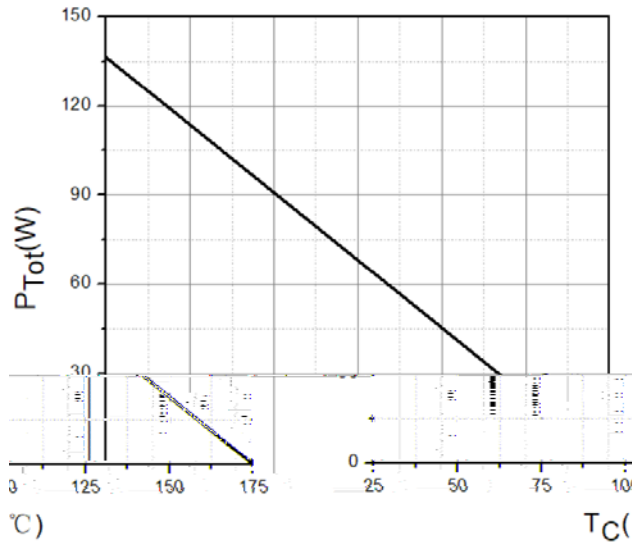


Figure 6. Power Derating

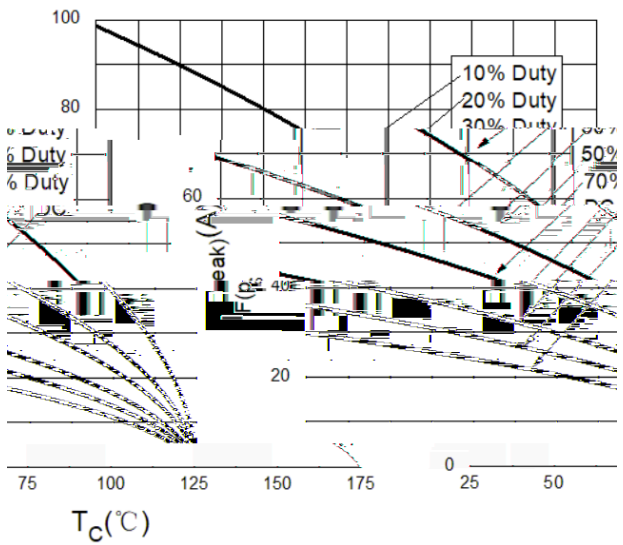


Figure 7. Current Derating

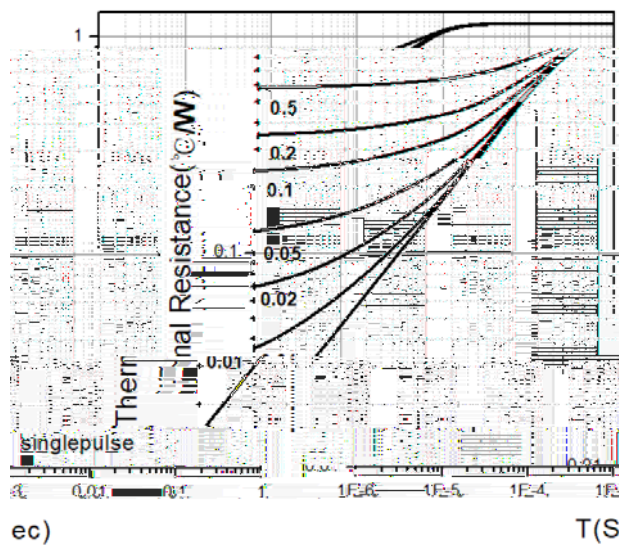


Figure 8. Transient Thermal Impedance





YJD106510DQG2

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