



Silicon Carbide Schottky Diode

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-247AB
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads
- **Polarity:** As marked

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

PARAMETER	SYMBOL	UNIT	VALUE
Device marking code			D106540NCTQG2
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	56/112
Continuous forward current @ $T_c=135^{\circ}\text{C}$			26/52
Continuous forward current @ $T_c=148^{\circ}\text{C}$			20/40
Non-repetitive peak forward surge current @ $T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$, Hal M nu p re c		p	
Power Dissipation@ $T_c=110^{\circ}\text{C}$			81/158
i^2t Value@ $T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$	$\int i^2 dt$	A^2S	128 ⁽¹⁾
Operating junction and Storage temperature range	T_j, T_{stg}	$^{\circ}\text{C}$	-55 to +175

(1) Per Leg, (2) Per Device

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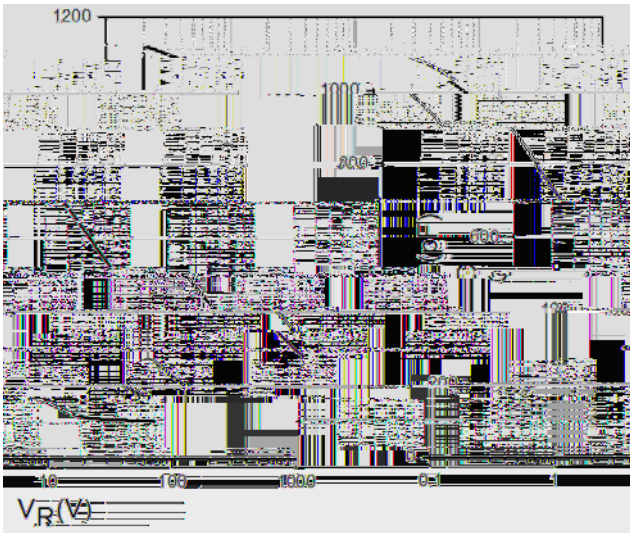


Figure 3. Capacitance vs. Reverse Voltage

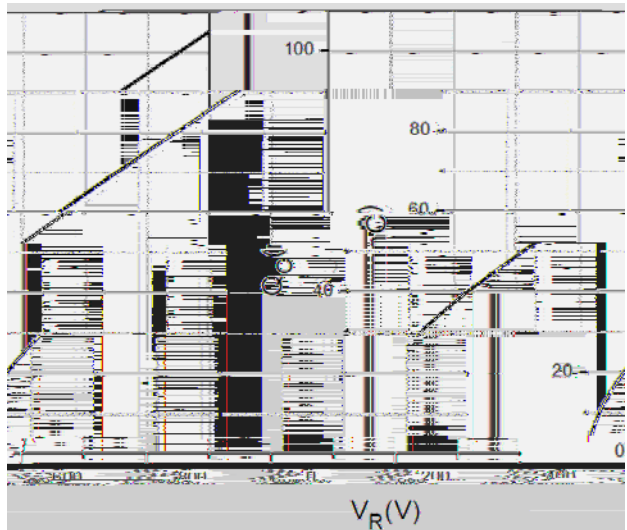


Figure 4. Total Capacitance Charge vs. Reverse Voltage

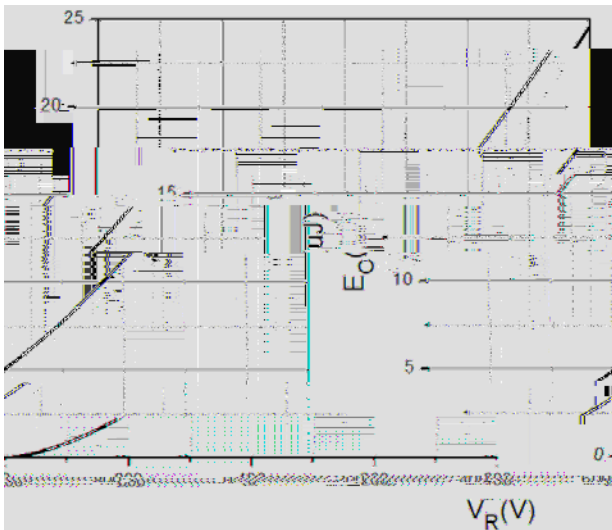


Figure 5. Capacitance Stored Energy



Figure 6. Power Derating

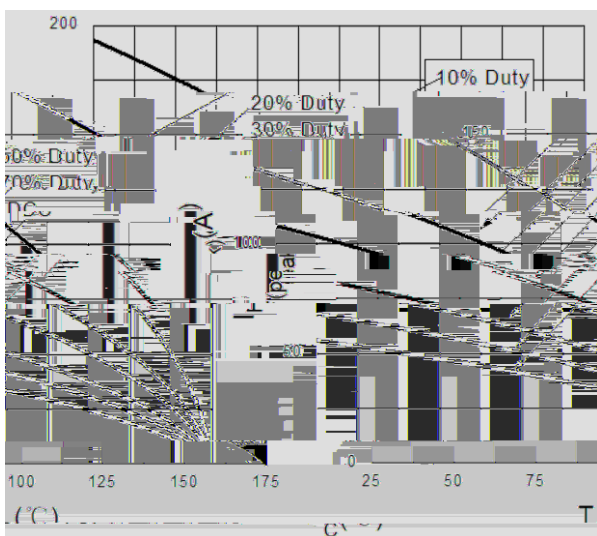


Figure 7. Current Derating





■Outline Dimensions

