



YJD112040NQG2

Silicon Carbide Schottky Diode

g
175 °C
recovery current

ts

ctor correction(PFC), solar
y, motor drives, photovoltaic



YJD112040NQG2

Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Typ.	Max.
Forward voltage drop	V_F	V	$I_F=40A, T_J=25^\circ C$	1.41	1.58
			$I_F=40A, T_J=175^\circ C$	2.02	
Reverse leakage current	I_R	μA	$V_R=1200V, T_J=25^\circ C$	3.1	38
			$V_R=1200V, T_J=175^\circ C$	19	
Total capacitive charge	Q_C	nC	$V_R=800V, T_J=25^\circ C, Q_C=\int_0^{V_R} I_C(V)dV$	216	
Total capacitance	C	μF	$V_R=0V, f=1MHZ$	2900	
			$V_R=400V, f=1MHZ$	204	
			$V_R=800V, f=1MHZ$	156	
Capacitance Stored Energy	E_C	μJ	$V_R=800V$	55	

Thermal Characteristics ($T_a=25^\circ C$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Thermal resistance	R_{J-C}	$^\circ C/W$	0.34

Characteristics (Typical)

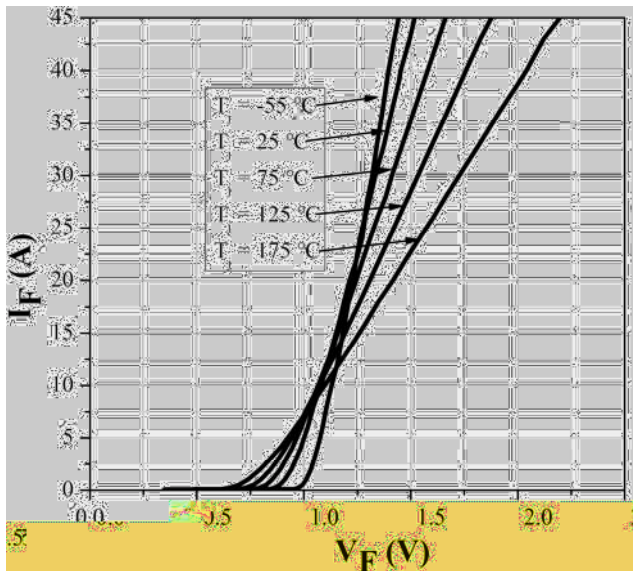


Figure 1. Forward Characteristics

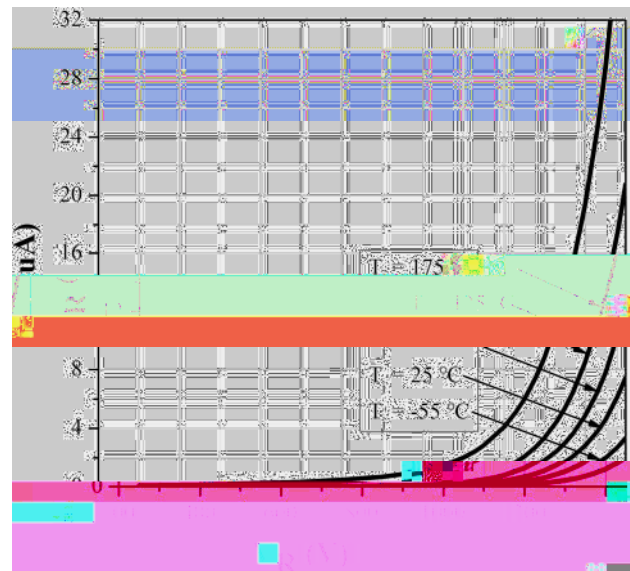


Figure2. Reverse Characteristic

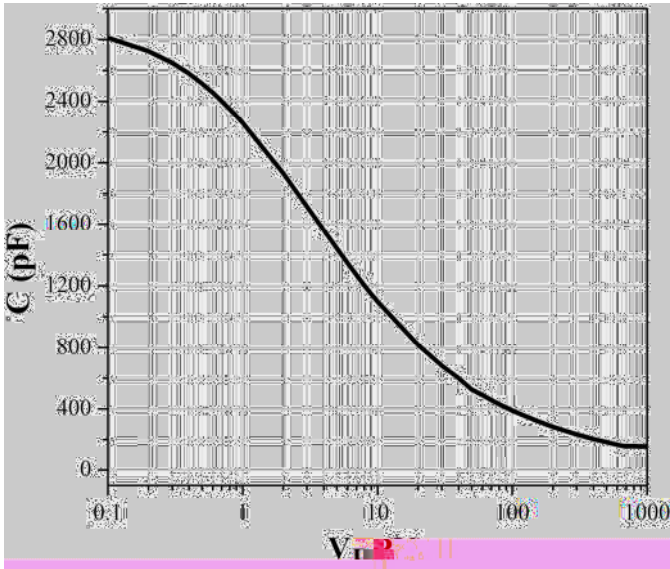


Figure 3. Capacitance vs. Reverse Voltage

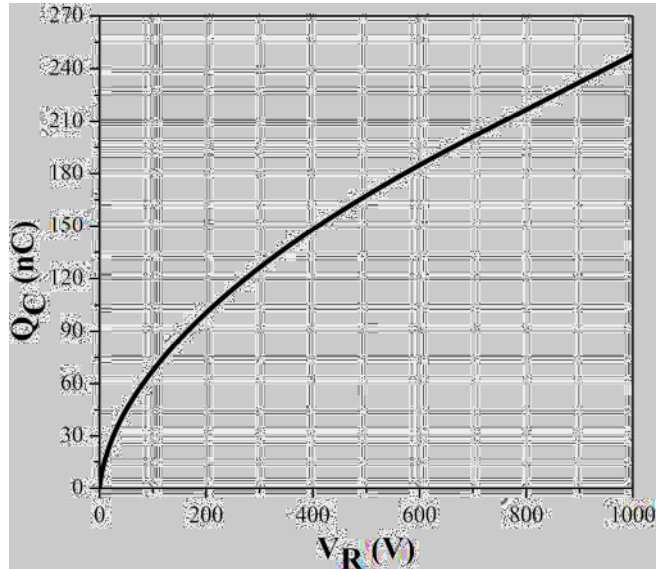


Figure 4. Total Capacitance Charge vs. Reverse Voltage

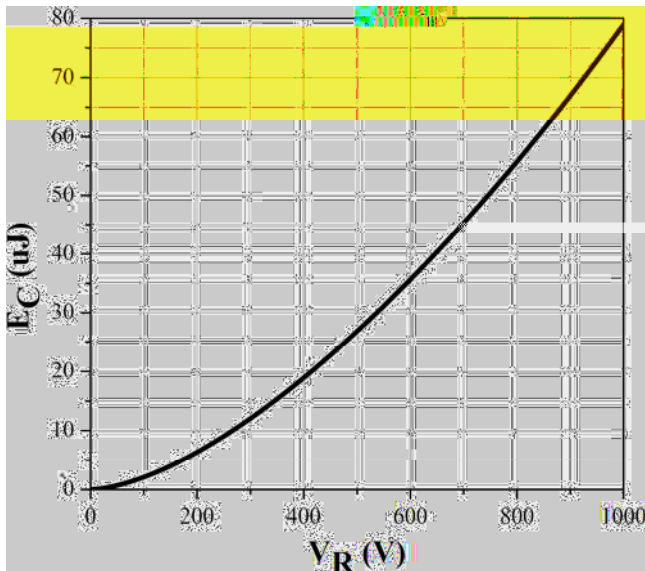


Figure 5. Capacitance Stored Energy

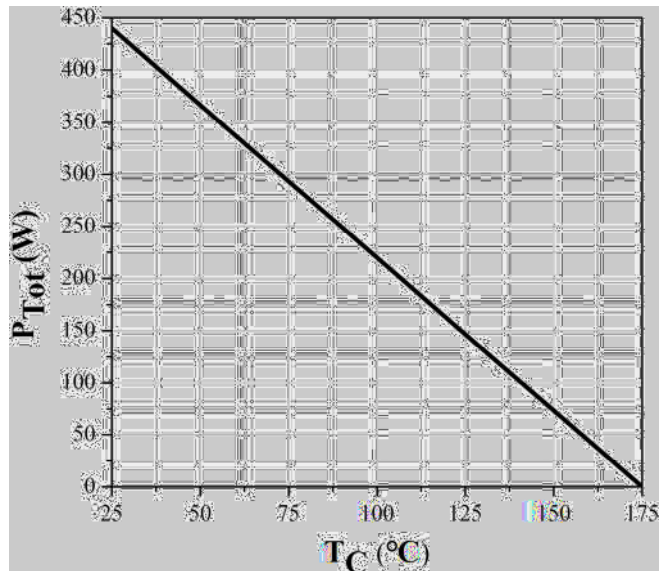


Figure 6. Power Derating

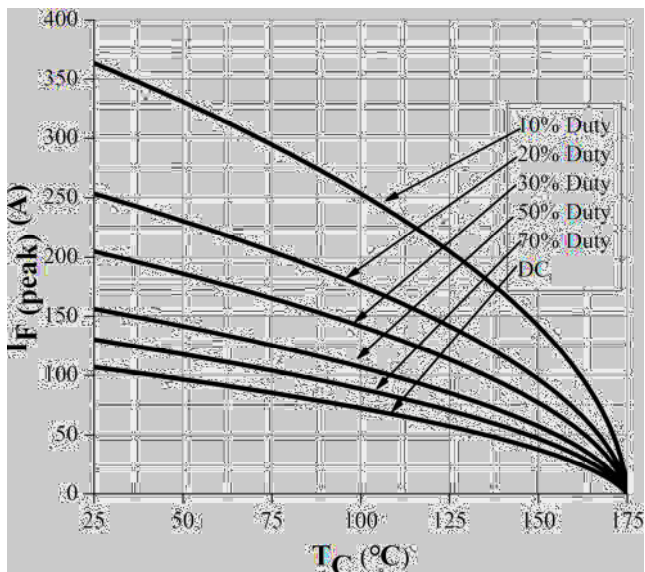


Figure 7. Current Derating

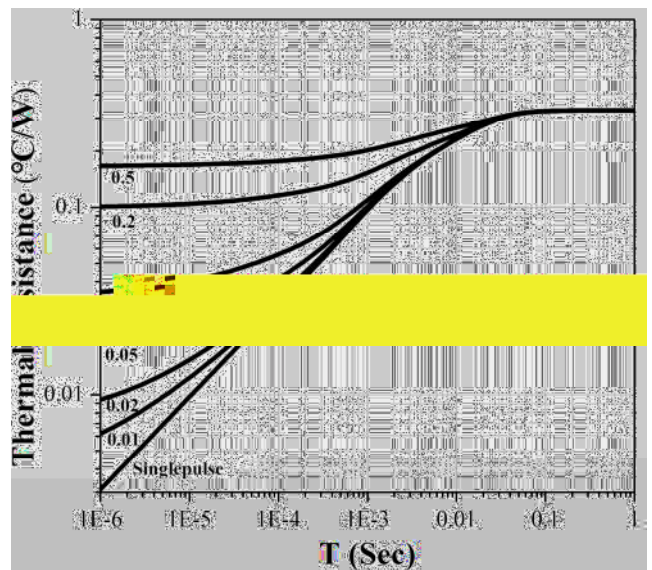


Figure 8. Transient Thermal Impedance



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