



Data Sheet 3853, Rev. -  
Maximum Ratings:

*Green Products*

Characteristics	Symbol	Condition	Max.	Units	
Peak Inverse Voltage	$V_{RWM}$	-	135(409CNQ135-G) 150(409CNQ150-G)	V	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$ , rectangular wave form	200	per leg	A
			400	per device	
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	2760	A	

**Electrical Characteristics:**

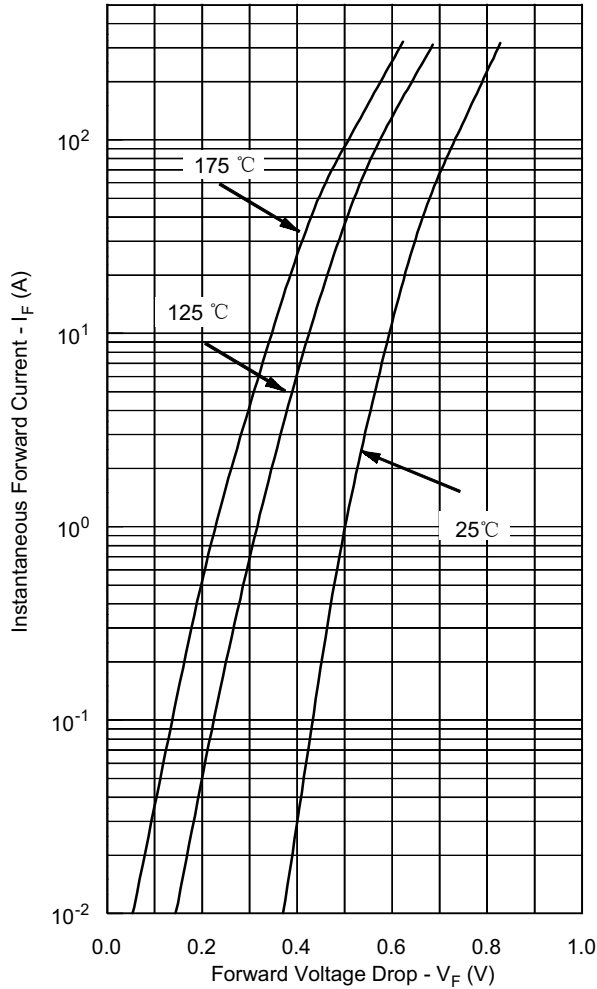
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 200 A, Pulse, $T_J = 25^\circ\text{C}$	1.03	V
		@ 400 A, Pulse, $T_J = 25^\circ\text{C}$	1.21	
	$V_{F2}$	@ 200 A, Pulse, $T_J = 125^\circ\text{C}$	0.72	V
		@ 400 A, Pulse, $T_J = 125^\circ\text{C}$	0.83	
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ , $T_J = 25^\circ\text{C}$	6	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , $T_J = 125^\circ\text{C}$	85	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{ V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{ MHz}$	6000	pF
Typical Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	5.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ $\mu\text{s}$

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

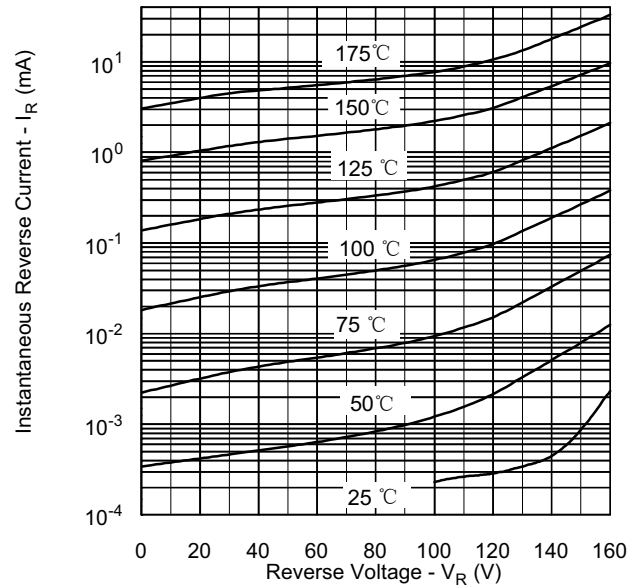
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units	
Max. Junction Temperature	$T_J$	-	-55 to +175	$^\circ\text{C}$	
Max. Storage Temperature	$T_{stg}$	-	-55 to +175	$^\circ\text{C}$	
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.20	$^\circ\text{C/W}$	
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.10	$^\circ\text{C/W}$	
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.10	$^\circ\text{C/W}$	
Approximate Weight	wt	-	79	g	
Mounting Torque	$T_M$	-	Mounting Torque Base	24 (min) 35 (max)	Kg-cm
			Terminal Torque	35 (min) 46 (max)	
Case Style	PRM4 Non-Isolated				

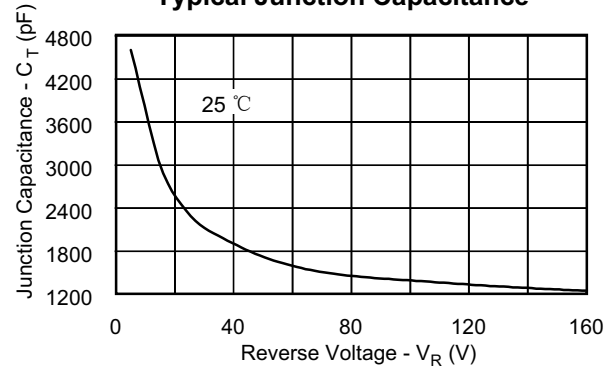
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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