

**Absolute Maximum Ratings of Freewheeling Diode**

V <sub>RRM</sub>	Repetitive Peak Reverse Voltage	1200	V
I <sub>F</sub>	Diode Continuous Forward Current, T <sub>C</sub> = 25°C	900	A
	Diode Continuous Forward Current, T <sub>C</sub> = 80°C	450	
I <sub>FM</sub>	Pulse Diode Current	900	A

**Electrical and Switching Characteristics of Freewheeling Diode**

Parameter		Typ.	Max.	Unit	Test Conditions
V <sub>F</sub>	Forward Voltage	2.20	2.70	V	T <sub>J</sub> = 25°C
		2.40			T <sub>J</sub> = 125°C
I <sub>rr</sub>	Peak Reverse Recovery Current	125		A	T <sub>J</sub> = 25°C
		175			T <sub>J</sub> = 125°C
Q <sub>rr</sub>	Reverse Recovery Charge	17.4		μC	T <sub>J</sub> = 25°C
		38.7			T <sub>J</sub> = 125°C
E <sub>rec</sub>	Reverse Recovery Energy	5.2		mJ	T <sub>J</sub> = 25°C
		12.1			T <sub>J</sub> = 125°C

I<sub>F</sub> = 450A,  
 V<sub>GE</sub> = 0V  
  
 I<sub>F</sub> = 450A,  
 di/dt = 1600A/μs,  
 V<sub>rr</sub> = 600V,  
 V<sub>GE</sub> = -15V

**NTC-Thermistor Characteristic Values**

Parameter		Typ.	Max.	Unit
R <sub>25</sub>	T <sub>C</sub> = 25°C	5		kΩ
ΔR/R	T <sub>C</sub> = 100°C, R <sub>100</sub> = 481Ω		± 5	%
P <sub>25</sub>	T <sub>C</sub> = 25°C	50		mW
B <sub>25/50</sub>	$R_2 = R_{25} \exp[B_{25/50}(1/T_2 - 1/(298.15K))]$	3380		K
B <sub>25/80</sub>	$R_2 = R_{25} \exp[B_{25/80}(1/T_2 - 1/(298.15K))]$	3440		K

**Module Characteristics**

Parameter		Min.	Typ.	Max.	Unit
V <sub>iso</sub>	Isolation Voltage (All Terminals Shorted), f = 50Hz, 1minute			2500	V
R <sub>θJC</sub>	Junction-to-Case (IGBT)		0.065		°C/W
R <sub>θJC</sub>	Junction-to-Case (Diode)		0.117		°C/W
R <sub>θCS</sub>	Case-To-Sink (Conductive Grease Applied)		0.1		°C/W
M	Power Terminals Screw: M6	3.0		5.0	N·m
M	Mounting Screw: M6	4.0		6.0	N·m
G	Weight		330		g