Electrical Characteristics, at T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Switching Characteristics, Inductive Load at T_j = 125 °C					
Turn-on delay time V_{CC} = 600 V, V_{GE} = 15 V, I_C = 50 A R_{Gon} = 22 Ω	$t_{d(on)}$	-	44	100	ns
Rise time V_{CC} = 600 V, V_{GE} = 15 V, I_C = 50 A R_{Gon} = 22 Ω	t_r	-	56	100	
Turn-off delay time V_{CC} = 600 V, V_{GE} = -15 V, I_C = 50 A R_{Goff} = 22 Ω	$t_{d(off)}$	-	380	500	
Fall time V_{CC} = 600 V, V_{GE} = -15 V, I_C = 50 A R_{Goff} = 22 Ω	t_f	-	70	100	
Free-Wheel Diode					
Diode forward voltage I_F = 50 A, V_{GE} = 0 V, T_j = 25 °C I_F = 50 A, V_{GE} = 0 V, T_j = 125 °C	V_F	- -	2 1.8	2.5 -	V
Reverse recovery time I_F = 50 A, V_R = -600 V, V_{GE} = 0 V di_F/dt = -800 A/µs, T_j = 125 °C	t_{rr}	-	0.2	-	µs
Reverse recovery charge I_F = 50 A, V_R = -600 V, V_{GE} = 0 V di_F/dt = -800 A/µs T_j = 25 °C T_j = 125 °C	Q_{rr}	- -	2.8 8	- -	µC

Electrical Characteristics, at T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Chopper Diode					
Chopper diode forward voltage	V_{FC}				V
I_{FC} = 75 A, V_{GE} = 0 V, T_j = 25 °C		-	2	2.5	
I_{FC} = 75 A, V_{GE} = 0 V, T_j = 125 °C		-	1.8	-	
Reverse recovery time, chopper	t_{rrC}				µs
I_{FC} = 75 A, V_R = -600 V, V_{GE} = 0 V					
di_F/dt = -800 A/µs, T_j = 125 °C		-	0.25	-	
Reverse recovery charge, chopper	Q_{rrC}				µC
I_{FC} = 75 A, V_R = -600 V, V_{GE} = 0 V					
di_F/dt = -900 A/µs					
T_j = 25 °C		-	3.2	-	
T_j = 125 °C		-	12	-	