Absolute Maximum Ratings of Freewheeling Diode

V_{RRM}	Repetitive Peak Reverse Voltage	1200	V
I_F	Diode Continuous Forward Current, T_C = 25°C	200	A
	Diode Continuous Forward Current, T_C = 80°C	100	
I_{FM}	Pulse Diode Current	200	A

Electrical and Switching Characteristics of Freewheeling Diode

Parameter		Typ.	Max.	Unit	Test Conditions	
V_F	Forward Voltage	2.20	2.70	V	T_J = 25°C	I_F = 100A , V_{GE} = 0V
		2.40			T_J = 125°C	
I_{rr}	Peak Reverse Recovery Current	40		A	T_J = 25°C	I_F = 100A, di/dt=660A/µs, V_{rr} = 600V, V_{GE} = -15V
		55			T_J = 125°C	
Q_{rr}	Reverse Recovery Charge	4.7		µC	T_J = 25°C	
		10.6			T_J = 125°C	
E_{rec}	Reverse Recovery Energy	1.5		mJ	T_J = 25°C	
		3.9			T_J = 125°C	

Module Characteristics

Parameter		Min.	Typ.	Max.	Unit
V_{iso}	Isolation Voltage (All Terminals Shorted), f = 50Hz, 1minute			2500	V
$R_{\theta JC}$	Junction-to-Case (IGBT)		0.26		°C/W
$R_{\theta JC}$	Junction-to-Case (Diode)		0.41		°C/W
$R_{\theta CS}$	Case-To-Sink (Conductive Grease Applied)		0.1		°C/W
M	Power Terminals Screw: M5	3.0		5.0	N·m
M	Mounting Screw: M6	4.0		6.0	N·m
G	Weight		165		g

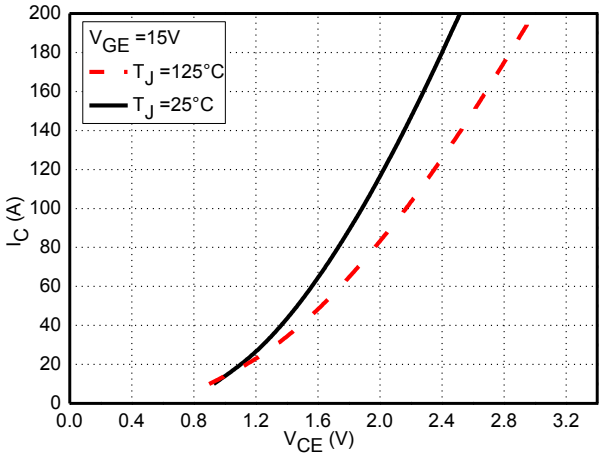

Fig.1 Typical IGBT Saturation Characteristics

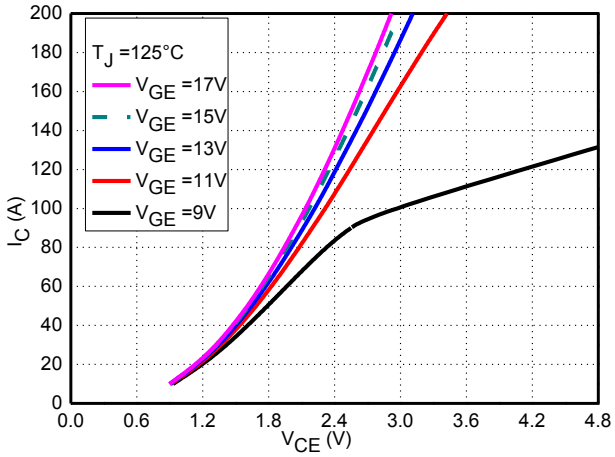

Fig.2 Typical IGBT Output Characteristics

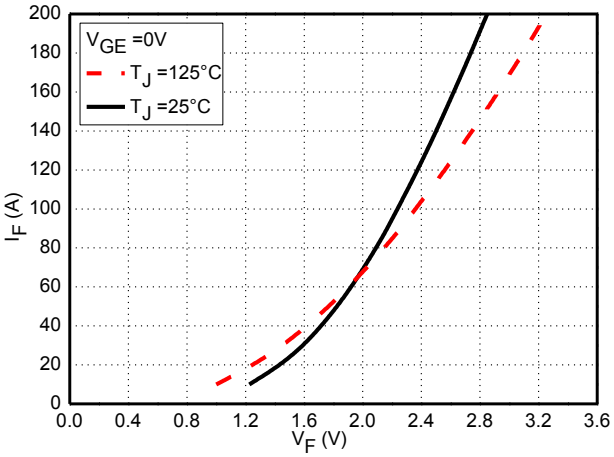

Fig.3 Typical Diode Forward Characteristics

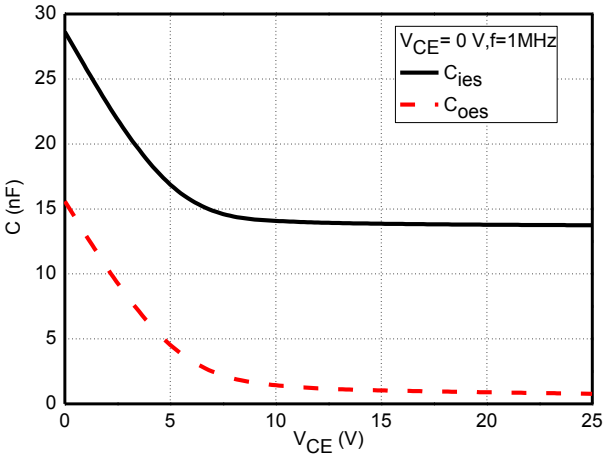

Fig. 4 Typical Capacitance Characteristics

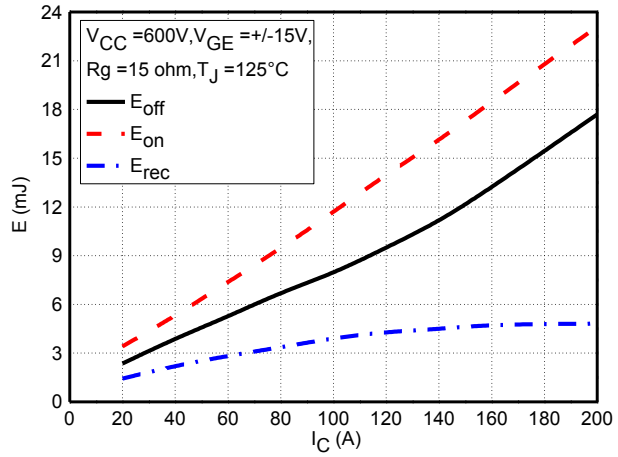

Fig.5 Typical Switching Loss vs. Collector Current

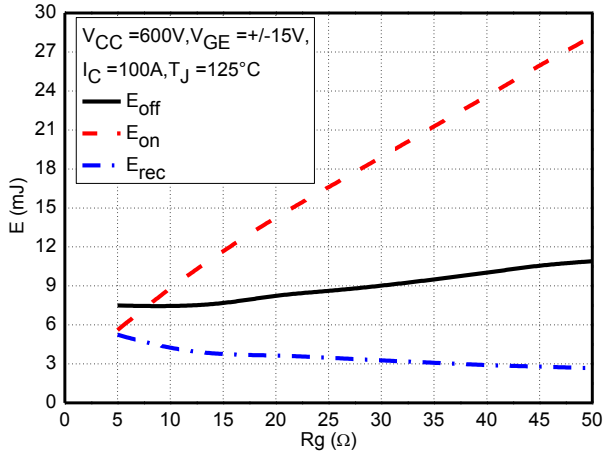

Fig.6 Typical Switching Loss vs. Gate Resistance

