Absolute Maximum Ratings

Parameter		Symbol	Value	Unit
Collector-Emitter Voltage		V_{CES}	1350	V
Gate-Emitter Voltage		V_{GES}	20	V
Continuous Collector Current	T_C = 25	I_c	40	A
	T_C = 100		20	A
Pulsed Collector Current (Note 1)		I_{CM}	100	A
Diode Continuous Forward Current	T_C = 100	I_F	20	A
Power Dissipation	T_C = 25	P_D	223	W

Electrical Characteristics of the DIODE T_C=25 , unless otherwise noted

Parameter	Symbol	Test condition		Min.	Typ.	Max.	Units
Diode Forward Voltage	V_{FM}	I_F = 20A	T_C = 25 °C	--	2.4	2.8	V
			T_C = 125 °C	--	2.75	--	
Reverse Recovery Time	t_{rr}	I_F = 20A, di/dt = 200A/μs	T_C = 25 °C	--	265	425	ns
			T_C = 125 °C	--	295	--	
Reverse Recovery Current	I_{rr}		T_C = 25 °C	--	23	35	A
			T_C = 125 °C	--	28.5	--	
Reverse Recovery Charge	Q_{rr}		T_C = 25 °C	--	3030	6000	nC
			T_C = 125 °C	--	4170	--	

IGBT Characteristics

Fig. 1 Output characteristics

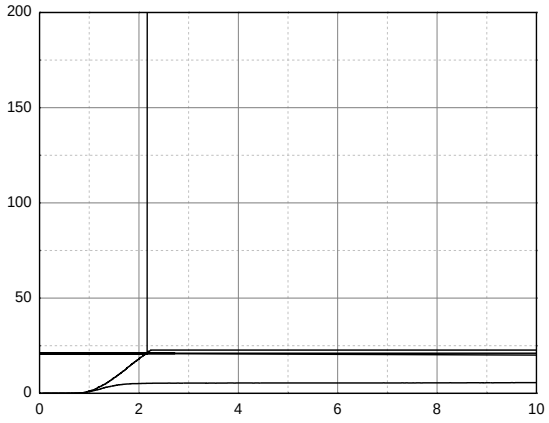


Fig. 2 Saturation voltage characteristics

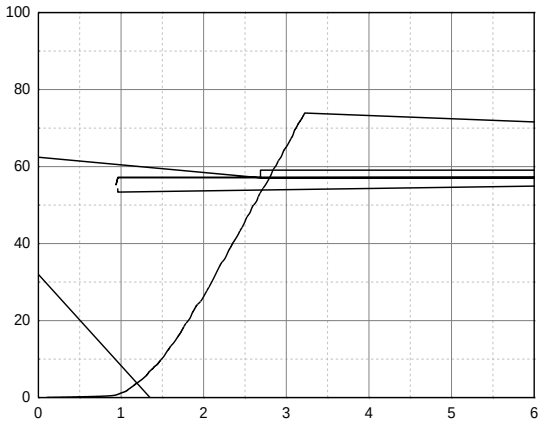


Fig. 3 Saturation voltage vs. collector current

Fig. 4 Saturation voltage vs. gate bias

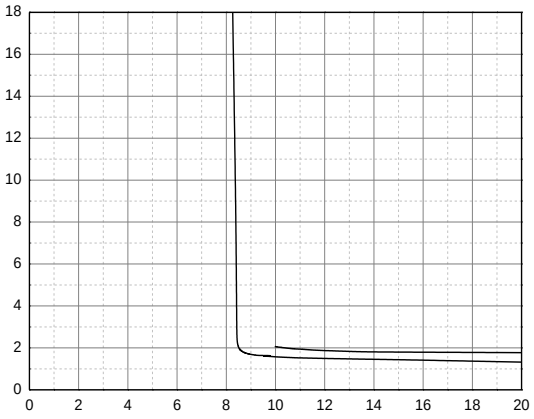


Fig. 5 Saturation voltage vs. gate bias

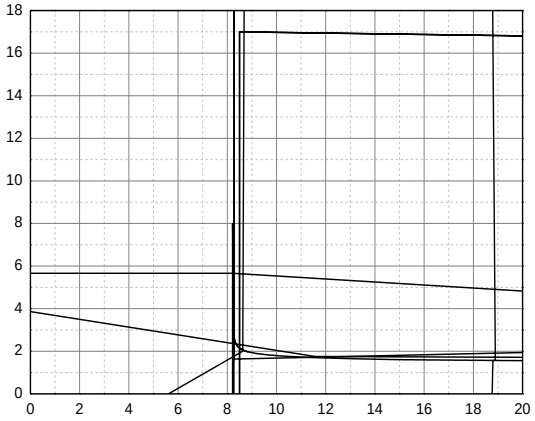


Fig. 6 Capacitance characteristics

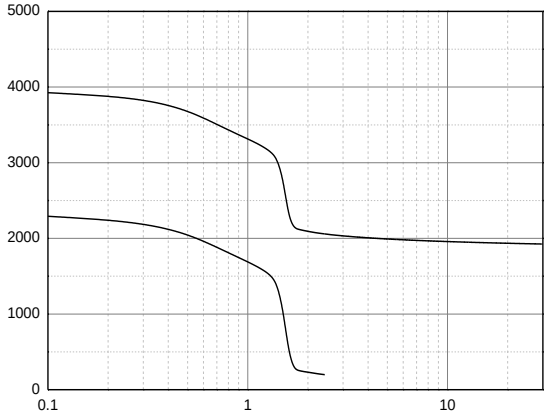


Fig. 7 Turn-on time vs. gate resistor

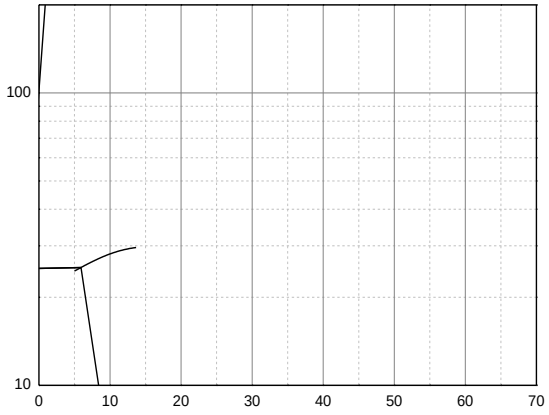


Fig. 8 Turn-off time vs. gate resistor

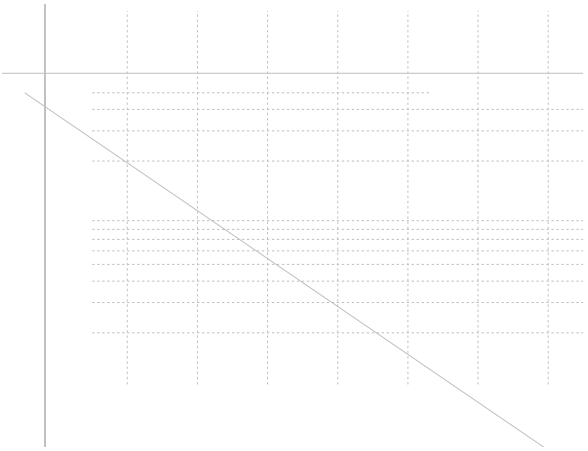


Fig. 9 Switching loss vs. gate resistor

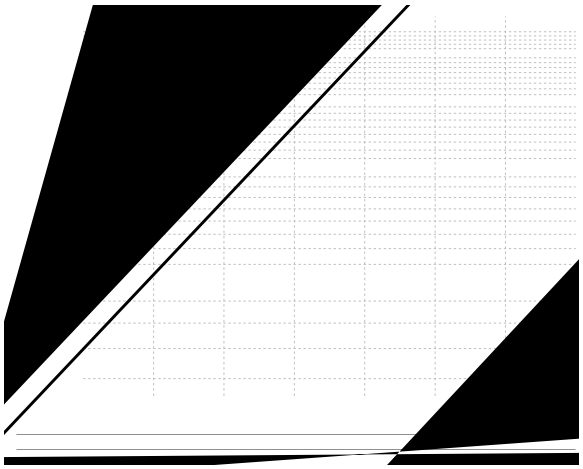
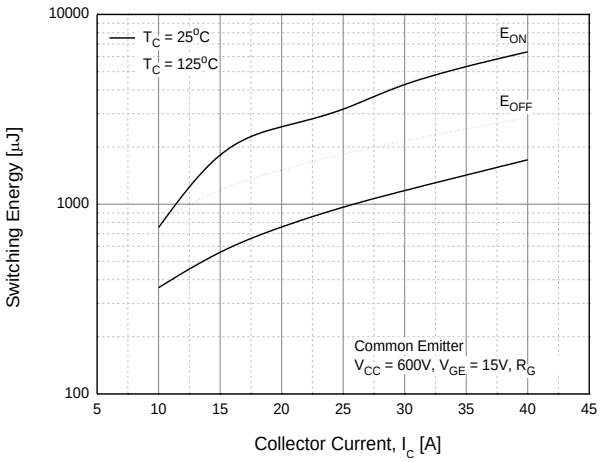


Fig. 10 Turn-on



IGBT Characteristics

Fig. 13 Gate charge characteristics

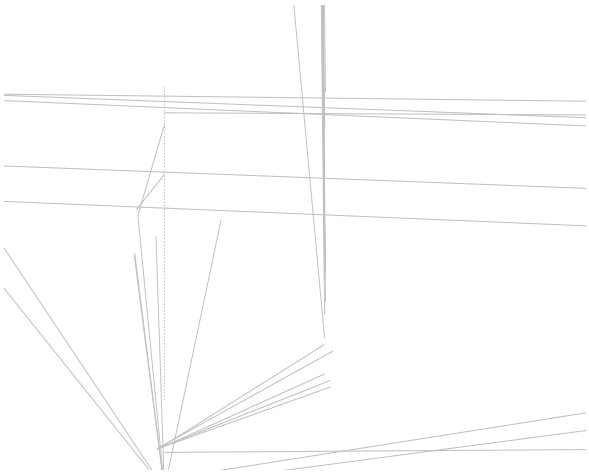


Fig. 14 SOA

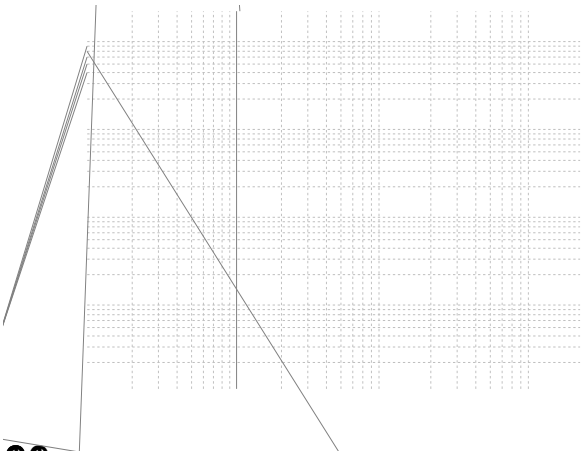


Fig. 15 RBSOA

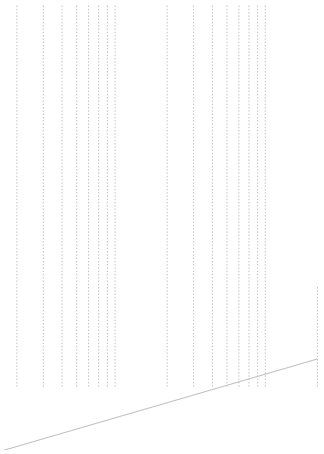


Fig. 16 Transient thermal impedance of IGBT

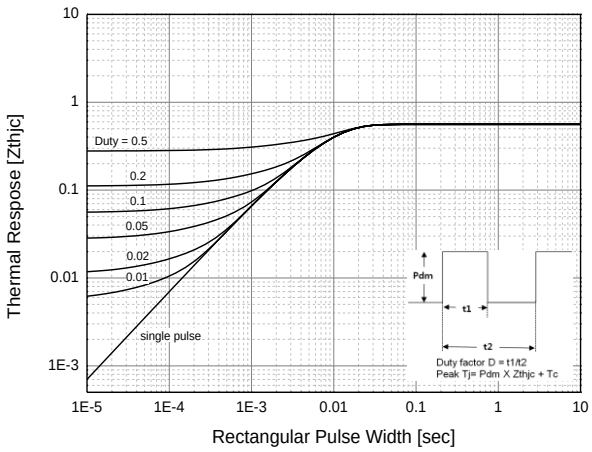
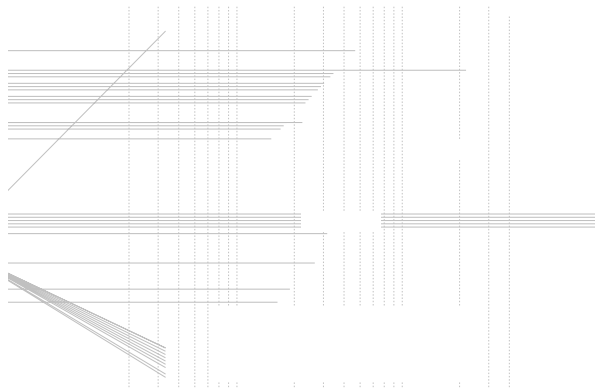
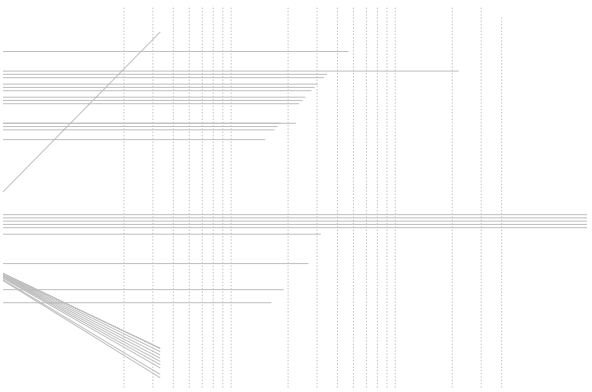


Fig. 17 Load Current vs. Frequency





Diode Characteristics

Fig. 19 Conduction characteristics

Fig. 20 Reverse recovery current vs. forward current

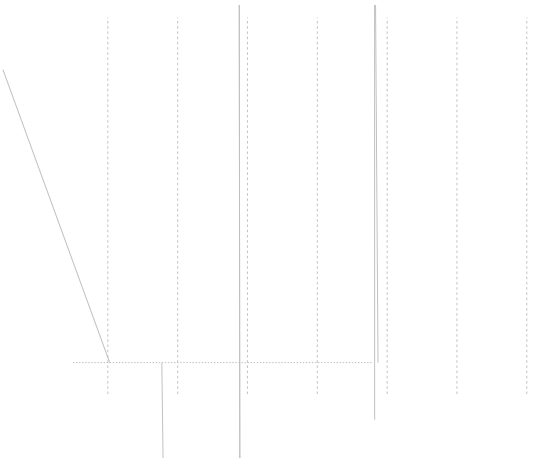


Fig. 21 Reverse recovery charge vs. forward current

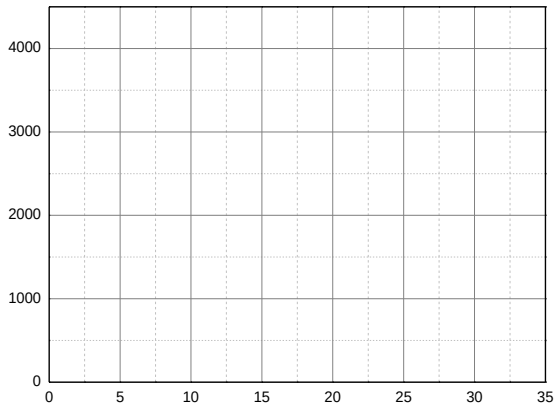


Fig. 22 Reverse recovery time vs. forward current