

- $V_{CE} = 1200V$
- ?



V_{CES}	Collector-emitter voltage	1200	V
V_{GES}	Gate-emitter voltage	± 20	V
I_C	Continuous collector current ($T_C=25^\circ$)	150	A
	Continuous collector current ($T_C=100^\circ$)	75	A
I_{CM}	Pulsed collector current, t_p limited by T_{vjmax}	300	A
I_F	Diode continuous forward current ($T_C=100^\circ$)	75	A
I_{FM}	Diode maximum current, t_p limited by T_{vjmax}	150	A
t_{sc}	Short circuit withstand time	10	μs
P_{tot}	Power dissipation ($T_C=25^\circ$)	882	W
	Power dissipation ($T_C=100^\circ$)	441	W
T_{vj}	Operating junction temperature range	-40 to +175	
T_{stg}	Storage temperature range	-55 to +150	

$R_{th(j-c)}$	Thermal resistance, junction to case for IGBT	-	0.17	K/ W
$R_{th(j-c)}$	Thermal resistance, junction to case for Diode	-	0.35	K/ W
$R_{th(j-a)}$	Thermal resistance, junction to ambient	-	40	K/ W



BV_{CES}	Collector-emitter breakdown voltage	$V_{GE}=0V, I_C=250\mu A$	1200	-	-	V
I_{CES}	Collector-emitter leakage current	$V_{CE}=1200V, V_{GE}=0V$	-	-	100	μA
I_{GES}	Gate leakage current, forward	$V_{GE}=20V, V_{CE}=0V$	-	-	100	nA
	Gate leakage current, reverse	$V_{GE}=-20V, V_{CE}=0V$	-	-	-100	nA
$V_{GE(th)}$	Gate-emitter threshold voltage	$V_{GE}=V_{CE}, I_C=1mA$	5.0	5.5	6.0	V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$V_{GE}=15V, I_C=75A$	-	1.7	-	V
		$V_{GE}=15V, I_C=75A, T_{vj}=175$	-	2.2	-	V

C_{ies}	Input capacitance	$V_{CE}=30V$	-	6800	-	pF
C_{oes}	Output capacitance	$V_{GE}=0V$ $f=1MHz$	-	350	-	



($T_{vj}=25$ unless otherwise specified)

V_F	Diode forward voltage	$I_F=75A$	-	1.8	-	V
		$I_F=75A$ $T_{vj}=175$	-	1.5	-	V
t_{rr}	Diode reverse recovery time	$V_R=600V$ $I_F=75A$ $di_F/dt=-200A/\mu s$	-	364	-	ns
I_{rrm}	Diode peak reverse recovery current		-	11	-	A
Q_{rr}	Diode reverse recovery charge		-	2300	-	nC
t_{rr}	Diode reverse recovery time	$V_R=600V$ $I_F=75A$ $di_F/dt=-200A/\mu s$ $T_{vj}=175$	-	576	-	ns
I_{rrm}	Diode peak reverse recovery current		-	23	-	A
Q_{rr}	Diode reverse recovery charge		-	8300	-	nC

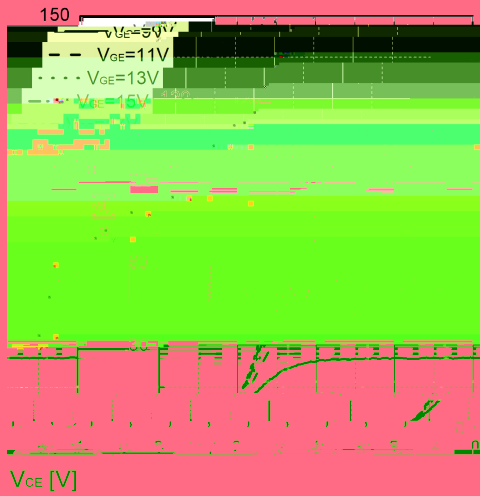


Fig 1. Typical output characteristic ($T_{vj}=25^{\circ}\text{C}$)

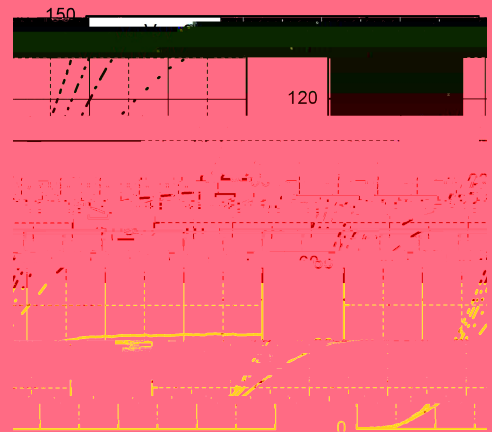


Fig 2. Typical output characteristic ($T_{vj}=175^{\circ}\text{C}$)

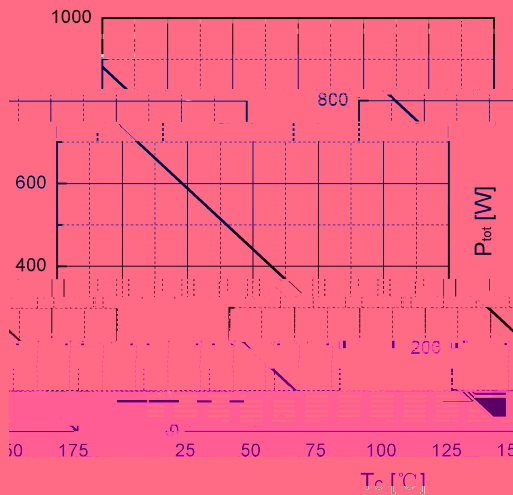


Fig 3. Power dissipation as a function of T_c

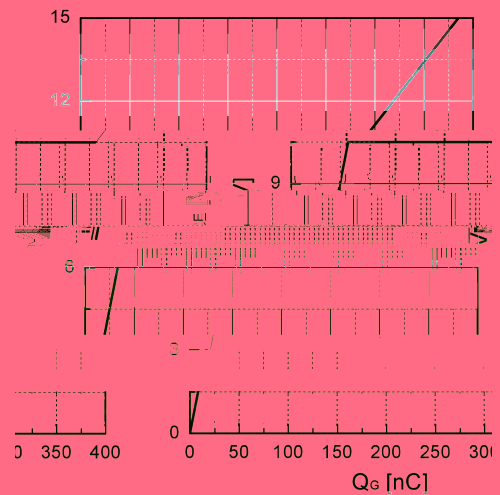


Fig 4. Typical Gate charge

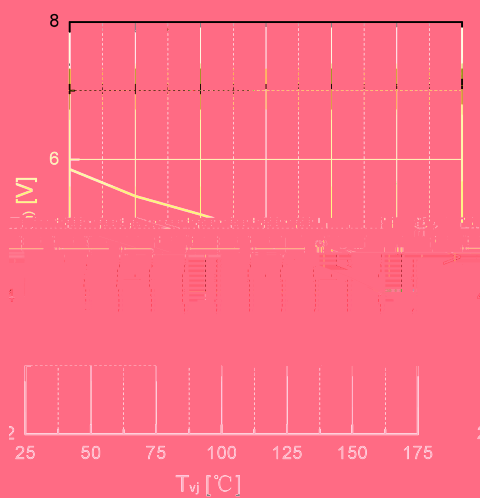


Fig 5. Typical $V_{GE(th)}$ as a function of T_{vj}
($I_C=1\text{mA}$)

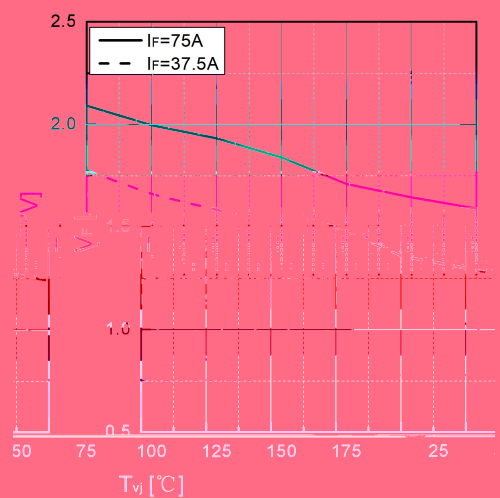


Fig 6. Typical V_F as a function of T_{vj}

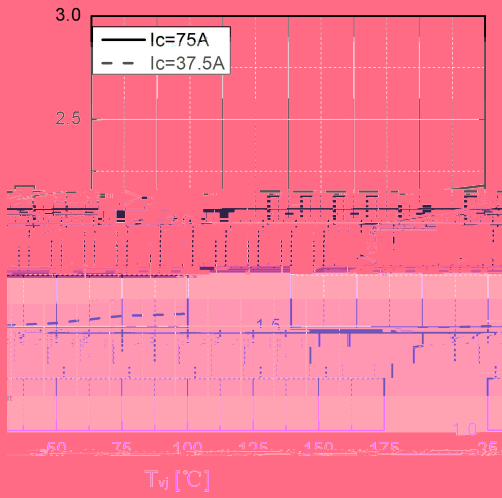


Fig 7. Typical V_{CEsat} as a function of T_{vj}

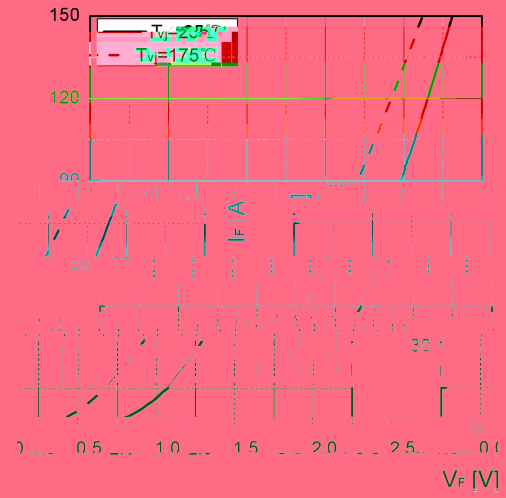


Fig 8. Typical I_F as a function of V_F

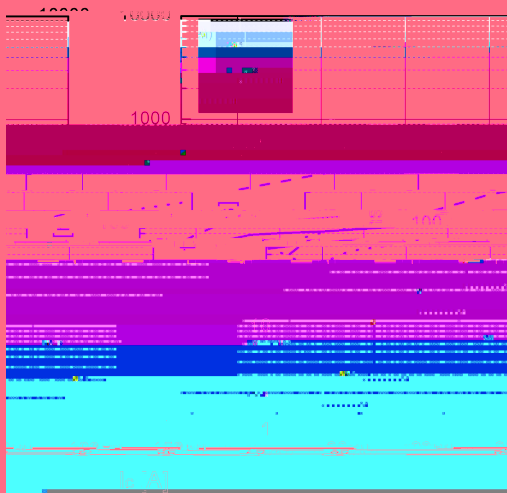


Fig 9. Typical switching time as a function of I_c

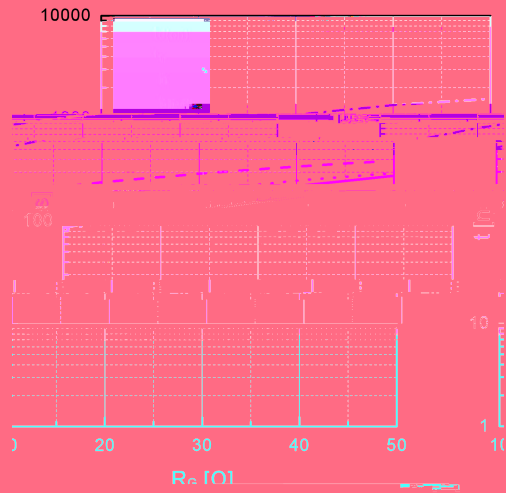


Fig 10. Typical switching times as a function of R_G

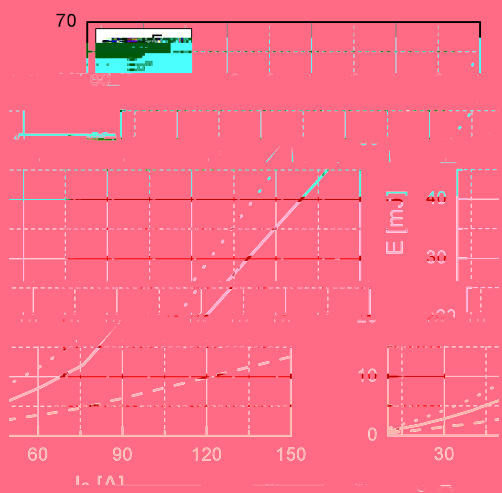


Fig 11. Typical switching energy losses as a function of I_c

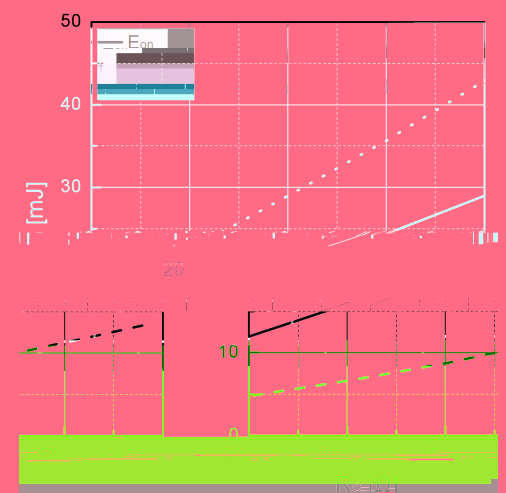


Fig 12. Typical switching energy losses as a function of R_G

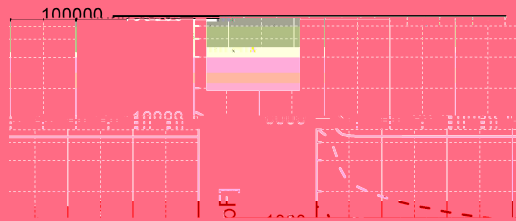
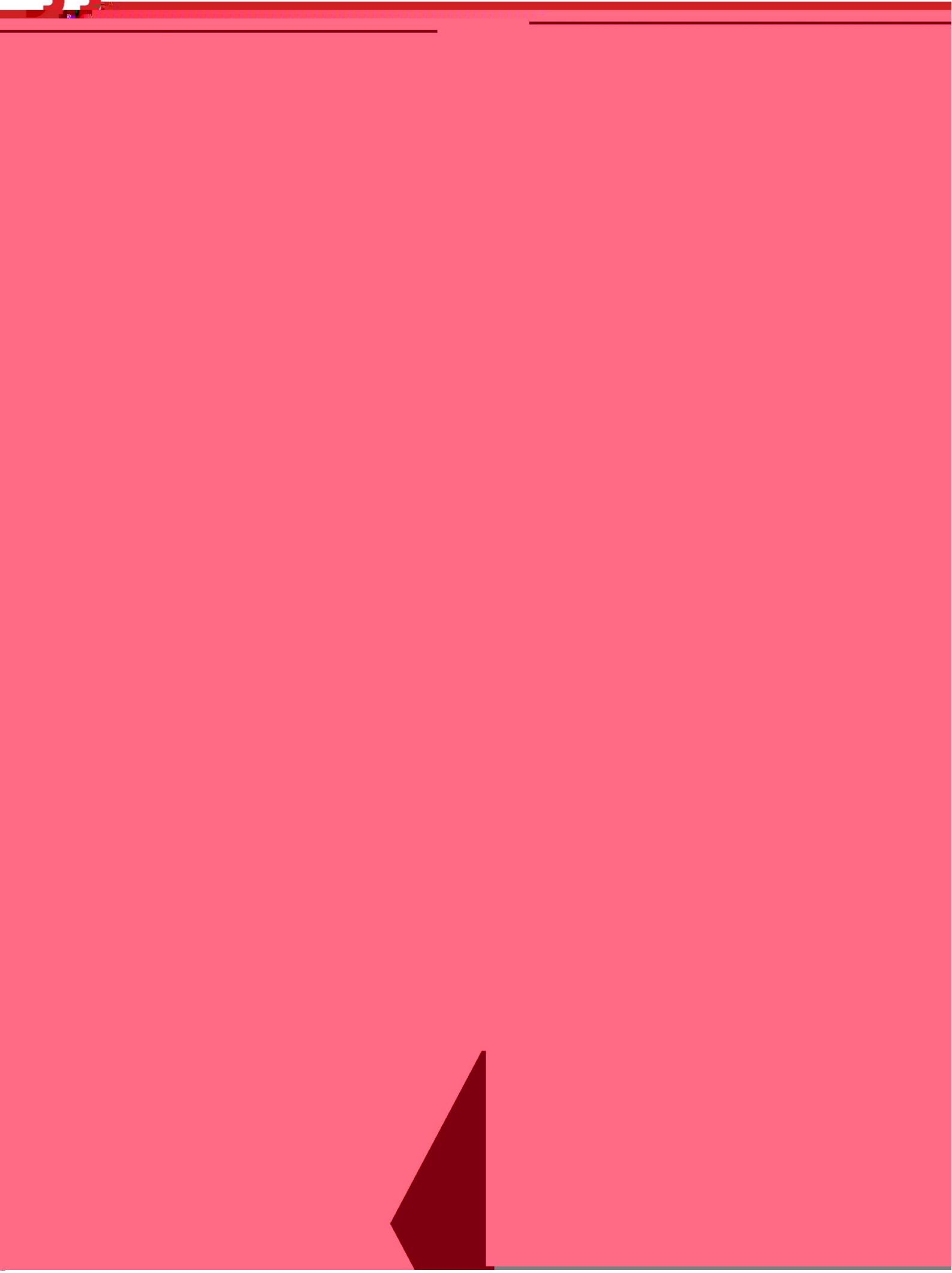


Fig 13. Typical capacitance as a function of V_{CE}
($f=1\text{MHz}$, $V_{GE}=0\text{V}$)





Date	Revision	Changes
2024-08-26	Rev. 1.2	Update
2025-02-17	Rev. 1.3	Modify the package size
2025-03-03	Rev. 2.0	Replace sketch

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