JJMICROELECTRONICS

V_{CES}	Collector-emitter voltage	1200	V
V_{GES}	Gate-emitter voltage	±20	V
I_C	Continuous collector current (T_C=25)	30	A
	Continuous collector current (T_C=100)	15	A
I_{CM}	Pulsed collector current, t_p limited by T_{vjmax}	60	A
I_F	Diode continuous forward current (T_C=100)	15	A
I_{FM}	Diode maximum current, t_p limited by T_{vjmax}	60	A
t_{sc}	Shm l		

0

)

(T_{vj}=25 unless otherwise specified)

Static characteristics

BV_{CES}	Collector-emitter breakdown voltage	V_{GE}=0V, I_C=250μA	1200	-	-	V
I_{CES}	Collector-emitter leakage current	V_{CE}=1200V, V_{GE}=0V	-	-	250	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	5.7	6.2	6.7	V
$V_{CE(sat)}$	Collector-emitter saturation voltage	V_{GE}=15 V, I_C=15A	-	1.7	-	V
		V_{GE}=15V, I_C=15A, T_{vj}=175	-	2.2	-	V

Dynamic characteristics

C_{ies}	Input capacitance	V_{CE}=30V V_{GE}=0V f=1MHz	-	1250	-	pF
C_{oes}	Output capacitance		-	58	-	pF
C_{res}	Reverse transfer capacitance		-	13	-	pF
Q_g	Total gate charge	V_{CC}=960V V_{GE}=15V I_C=15A	-	74	-	nC

(T_{vj}=25 unless otherwise specified)

V_F	Diode forward voltage	I_F=15A	-	2.3	-	V
		I_F=15A T_{vj}=175	-	1.9	-	V
t_{rr}	Diode reverse recovery time	V_R=600V I_F=15A di_F/dt=-250A/μs	-	223	-	ns
I_{rrm}	Diode peak reverse recovery current		-	8	-	A
Q_{rr}	Diode reverse recovery charge		-	718	-	nC
t_{rr}	Diode reverse recovery time	V_R=600V I_F=15A di_F/dt=-250A/μs T_{vj}=175	-	396	-	ns
I_{rrm}	Diode peak reverse recovery current		-	11	-	A
Q_{rr}	Diode reverse recovery charge		-	1700	-	nC

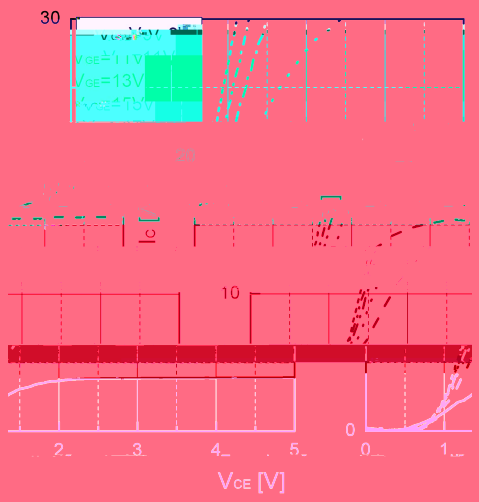

Fig 1. Typical output characteristic (T_{vj}=25)

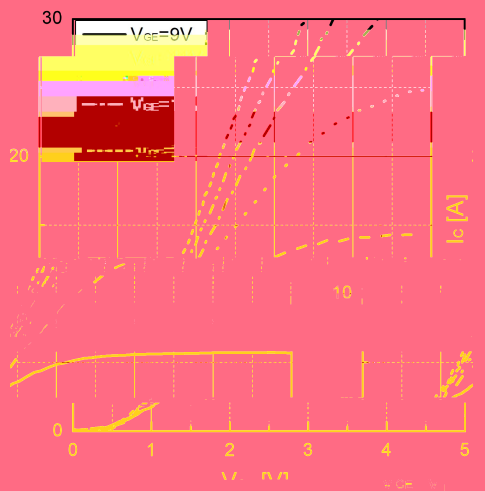

Fig 2. Typical output characteristic(T_{vj}=175)

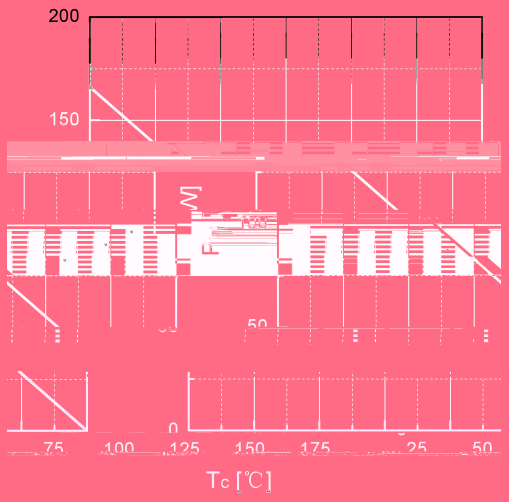

Fig 3. Power dissipation as a function of T_C

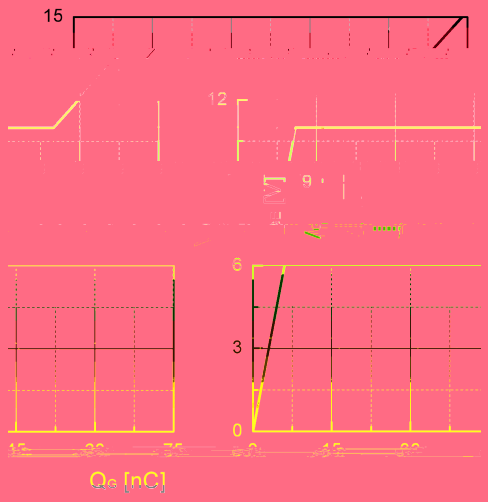

Fig 4. Typical Gate charge

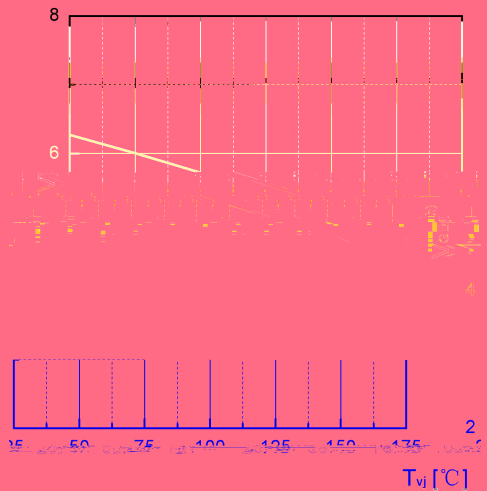

Fig 5. Typical $V_{GE(th)}$ as a function of T_{vj} (I_C=1mA)

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

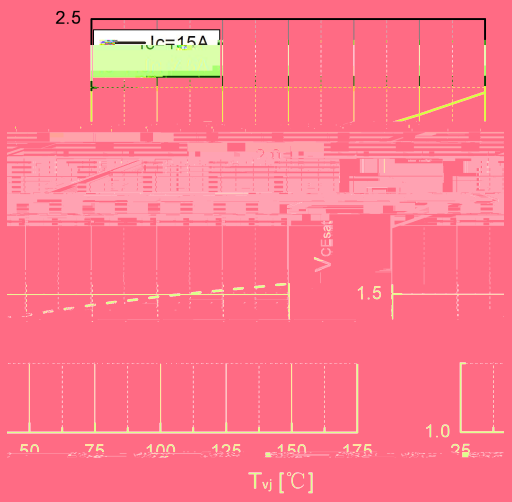

Fig 7. Typical V_{CEsat} as a function of T_{vj}

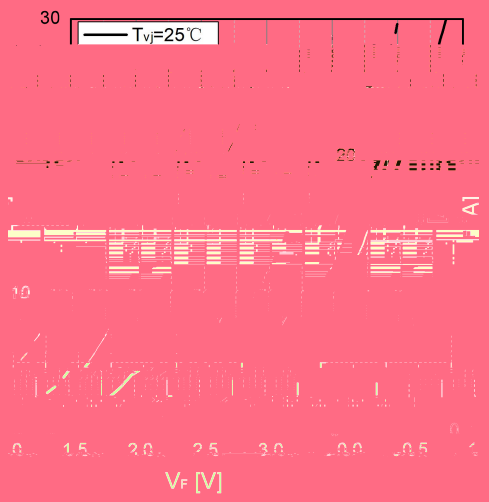

Fig 8. Typical I_F as a function of V_F

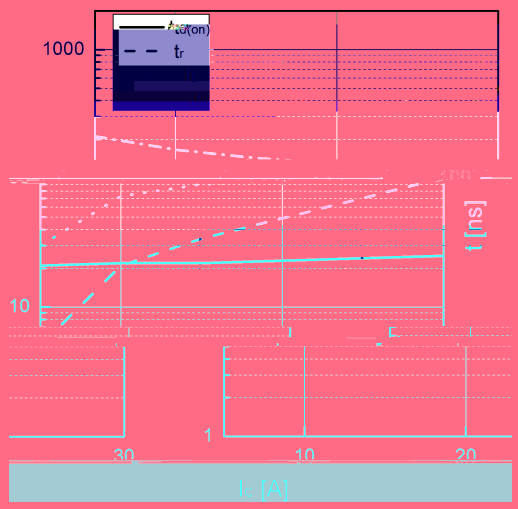

Fig 9. Typical switching time as a function of I_C

Fig 10. Typical switching times as a function of R_G

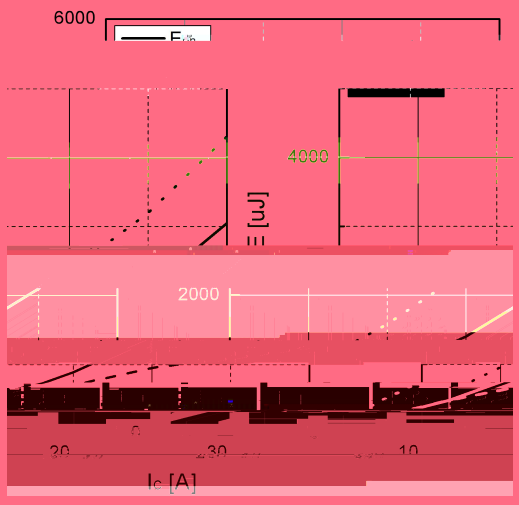

Fig 11. Typical switching energy losses as a function of I_C

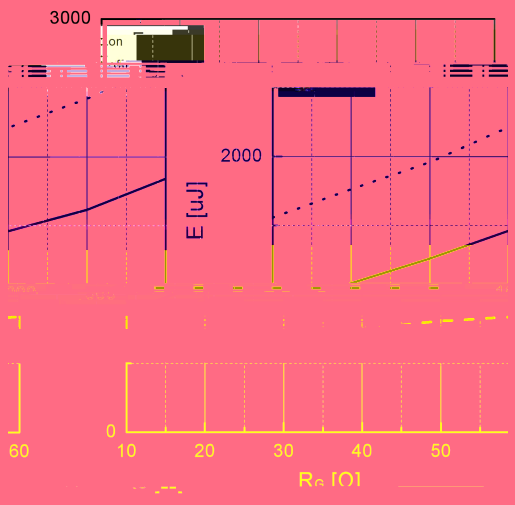

Fig 12. Typical switching energy losses as a function of R_G

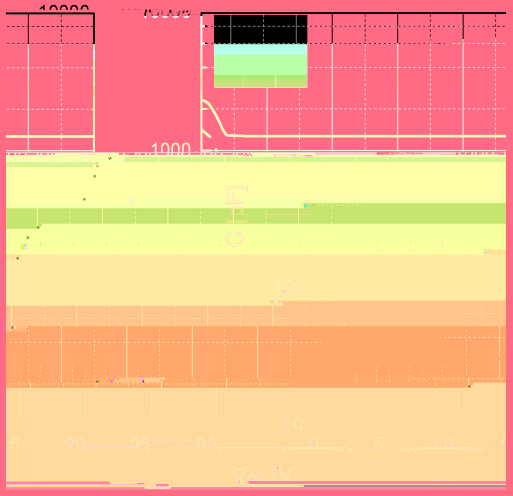

Fig 13. Typical capacitance as a function of V_{CE}
(f=1Mhz, V_{GE}=0V)

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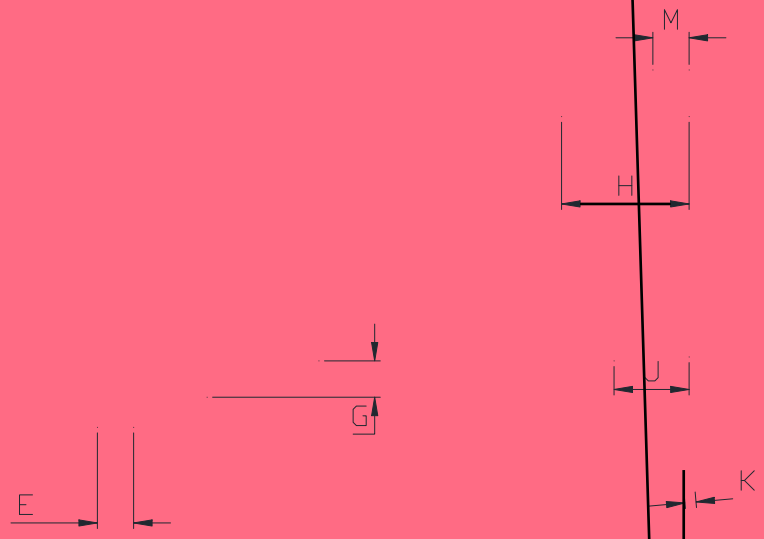

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90	-	10.20	0.390	-	0.402
B	14.70	-	15.80	0.579	-	0.622
C	9.4	-	9.6	0.37	-	0.378
D	-	2.54	-	-	0.100	-
E	1.20		1.40	0.047	-	0.055
F	0.75	-	0.85	0.029	-	0.033
G	-	-	1.75	-	-	0.069
H	4.40	-	4.70	0.173	-	0.185
J	2.30	-	2.70	0.091	-	0.106
K	0.38	-	0.55	0.015	-	0.022
L	0	0.10	0.25	0	0.004	0.010
M	1.25	-	1.35	0.049	-	0.053

Date	Revision	Changes
2025-04-11	Rev 1.0	Release of the datasheet