JJMICROELECTRONICS

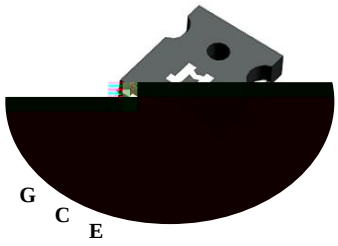
650V 40A Trench and Field Stop IGBT

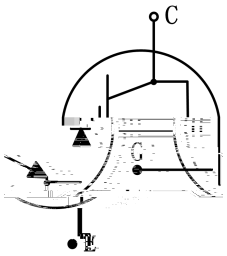
JJT40N65SE

Key performance:

- $_{CE}$ =650V
- $_{C}$=40A@ $_{C}$=100
- $_{CE(sat)}$=

TO-247





Features:

- Trench [illegible] technology.
- Positive $V_{CE\ (sat)}$ temperature coefficb ay.

Symbol	Parameter	Values	Unit
CES	Collector-emitter voltage	650	V
GES	Gate-emitter voltage	±20	V
C	Continuous collector current (C=25)	80	A
	Continuous collector current (C=100)	40	A
CM	Pulsed collector current, p limited by vjmax	160	A
F	Diode continuous forward current (C=100)	40	A
FM	Diode maximum current, p limited by vjmax	160	A
sc	Short circuit withstand time	8	µs
tot	Power dissipation (C=25)	300	W
	Power dissipation)		

Symbol	Parameter	Test condition	Values			Unit
			Min.	Typ.	Max.	

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Typical performance characteristics

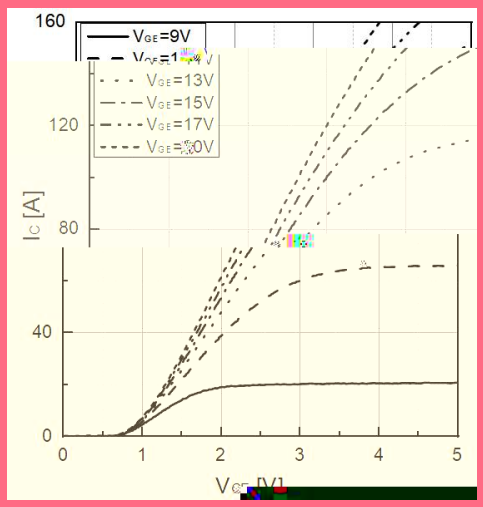


Fig 1. Typical output characteristic (vj=25)

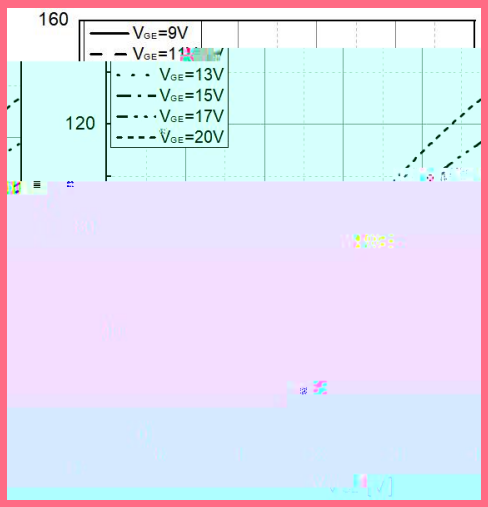


Fig 2. Typical output characteristic(vj=175)

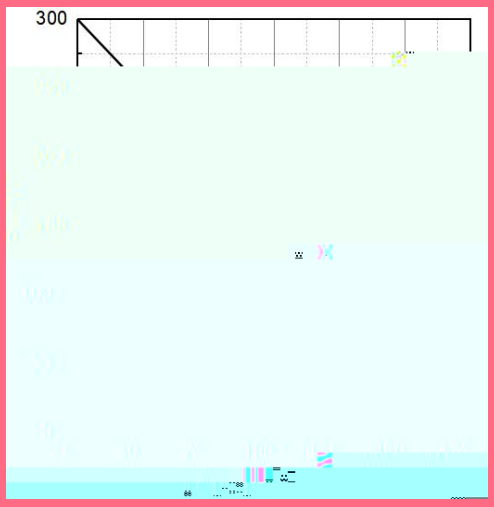


Fig 3. Power dissipation as a function of

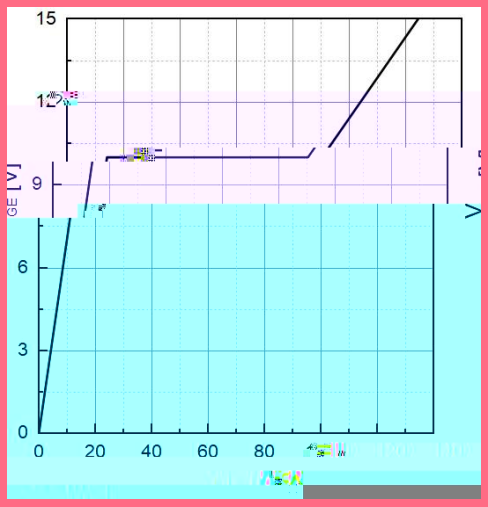


Fig 4. Typical Gate charge

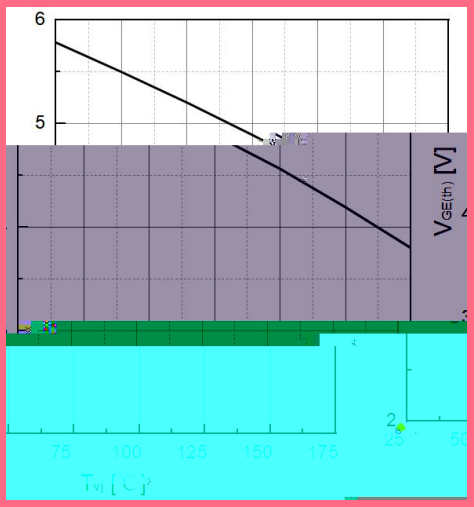


Fig 5. Typical GE(th) as a function of vj (C=1mA)

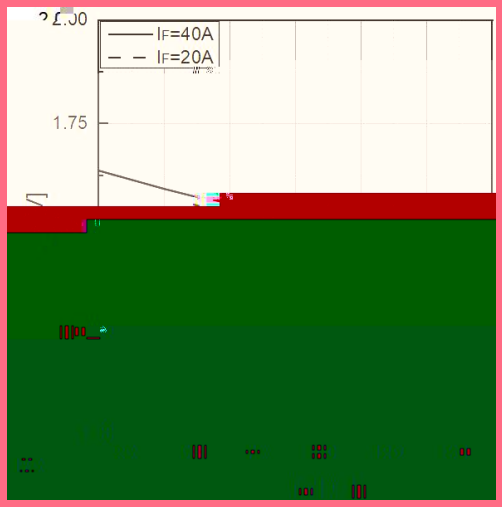


Fig 6. Typical F as a function of vj

Typical performance characteristics

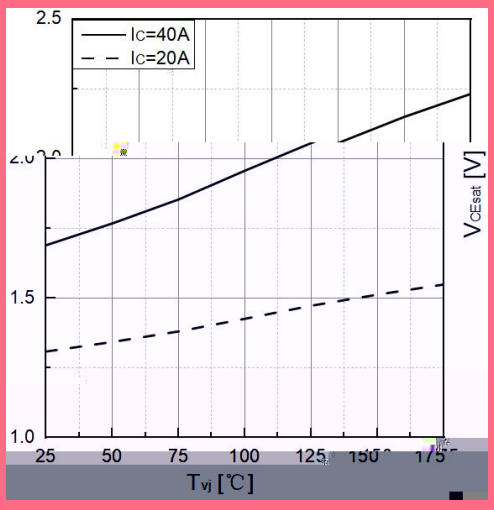


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

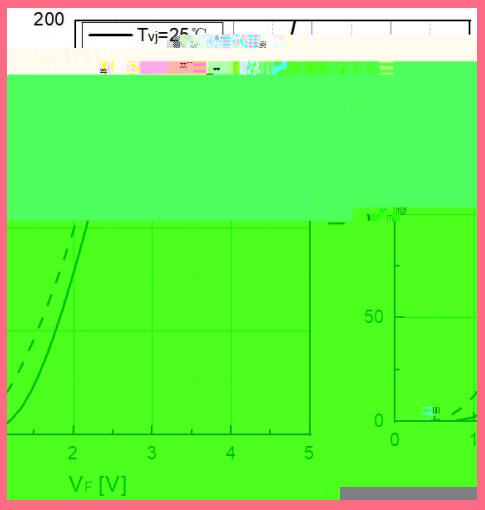


Fig 8. Typical $_{F}$ as a function of $_{F}$

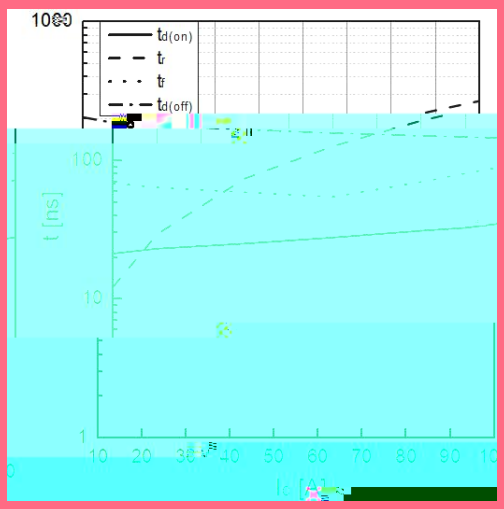


Fig 9. Typical switching time as a function of $_{C}$

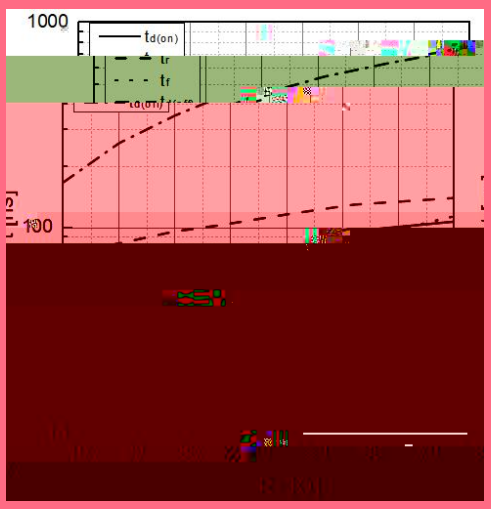


Fig 10. Typical switching time as a function of $_{G}$

Typical performance characteristics

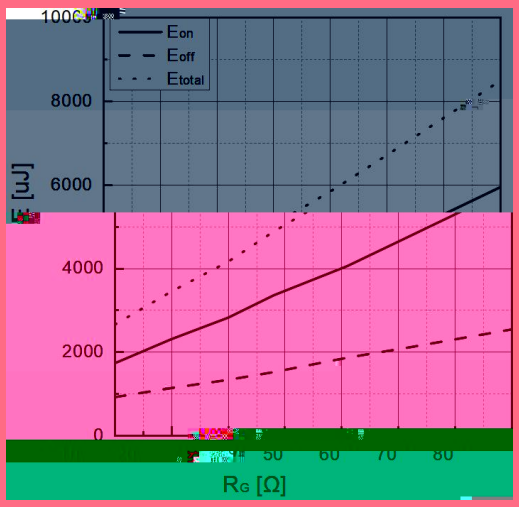


Fig 13. Typical switching energy losses as a function of $_G$

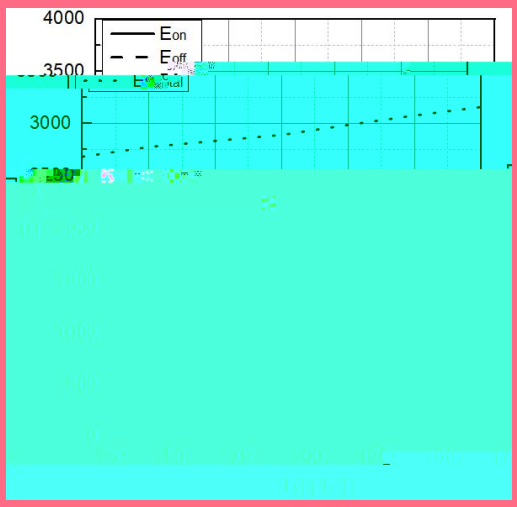


Fig 14. Typical switching energy losses as a function of



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	Revisi	Cha
2025-05-05	Rev 1.0	Prel ary Release of the datasheet
2025-11-30	Rev 1.1	Release of the Characterization
2026-06-25	Rev 1.2	Update thermal

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