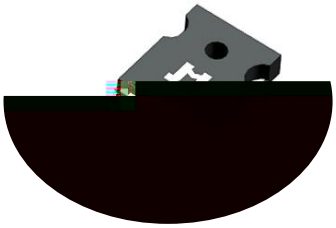
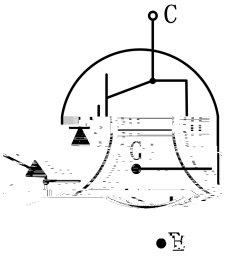
TO-247

- V_{CE}=650V
- I_C=20A@ T_C=100
- $V_{CE(sat)}$=1.6 V



- High ruggedness performance.
- 10μs short circuit capability.
- Positive $V_{CE\ (sat)}$ temperature coefficient.
- High efficiency for motor control.
- Excellent current sharing in parallel operation.
- RoHS compliant.



- Home appliances
- Motor drives
- General inverter

Type	Marking	Package	Packaging method
JJT20N65SE	T2065SE	TO-247	Tube

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			i t
CES	Collector-emitter voltage	650	V
GES	Gate-emitter voltage	±20	V
C	Continuous collector current (C=25)	40	A
	Continuous collector current (C=100)	20	A
CM	Pulsed collector current, p limited by vjmax	80	A
F	Diode continuous forward current (C=100)	20	A
FM	Diode maximum current, p limited by vjmax	80	A
sc	Short circuit withstand time	10	µs
tot	Power dissipation (C=25)	187	W
	Power dissipation (C=100)	93	W
vj	Operating junction temperature range	-40 to +175	
stg	Storage temperature range	-55 to +150	

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V_{CES}	Collector-emitter breakdown voltage	V_{GE}=0V, I_C=250μA	650

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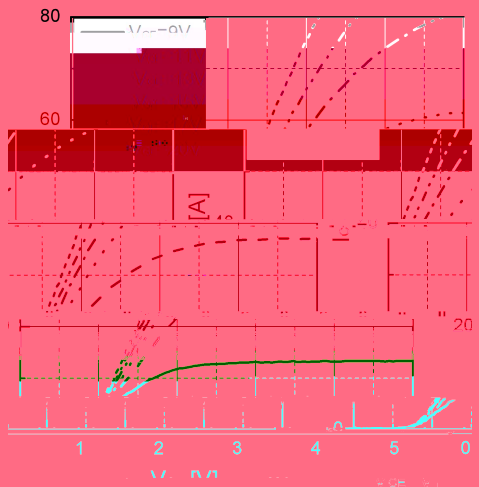


Fig 1. Typical output characteristic ($_{vj}$=25)

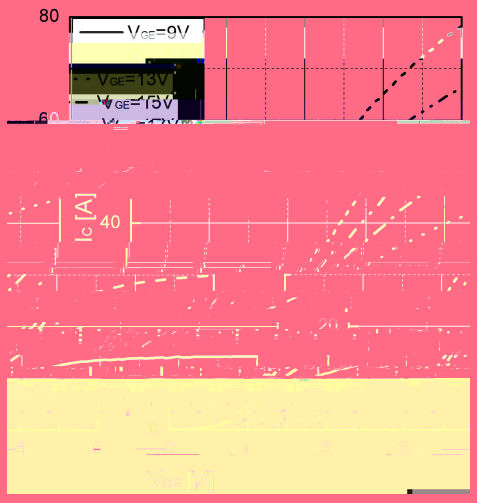


Fig 2. Typical output characteristic($_{vj}$=175)

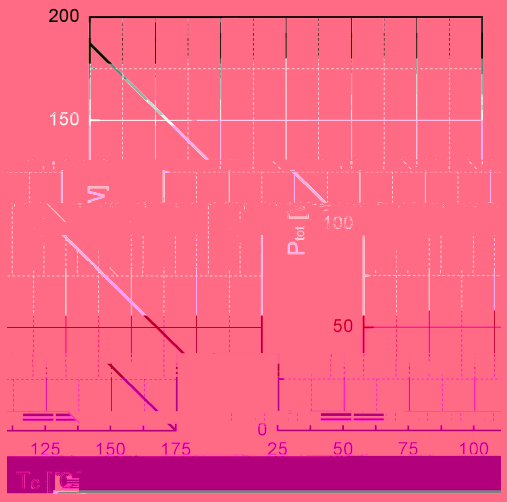


Fig 3. Power dissipation as a function of

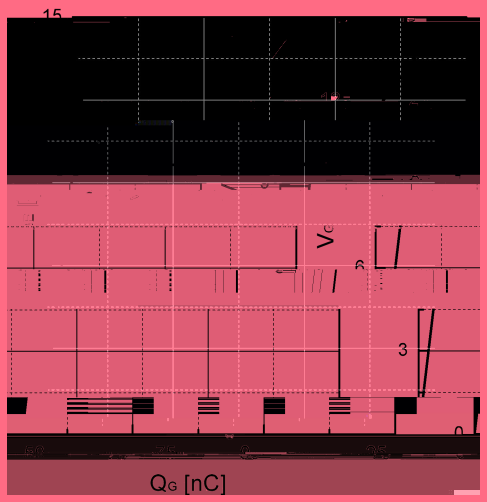


Fig 4. Typical Gate charge

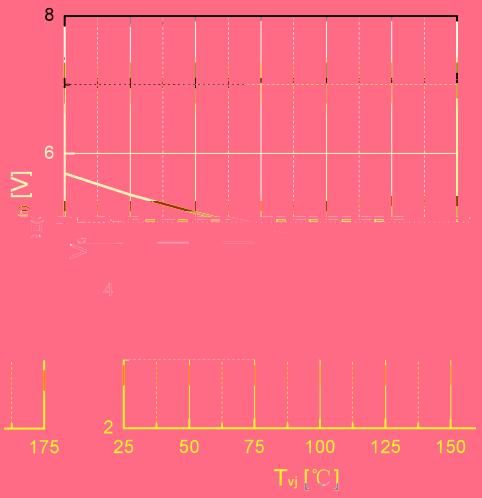


Fig 5. Typical $_{GE(th)}$ as a function of $_{vj}$ ($_{C}$=1mA)

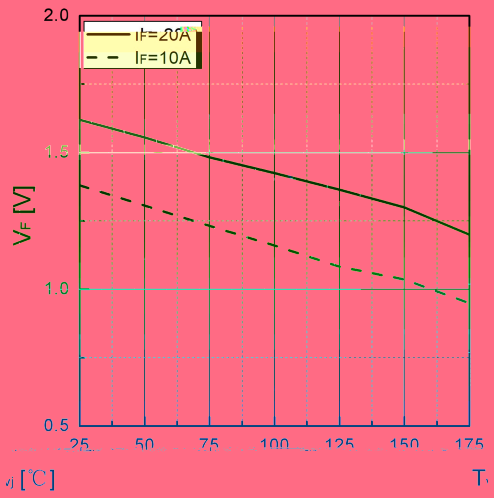


Fig 6. Typical $_{F}$ as a function of $_{vj}$

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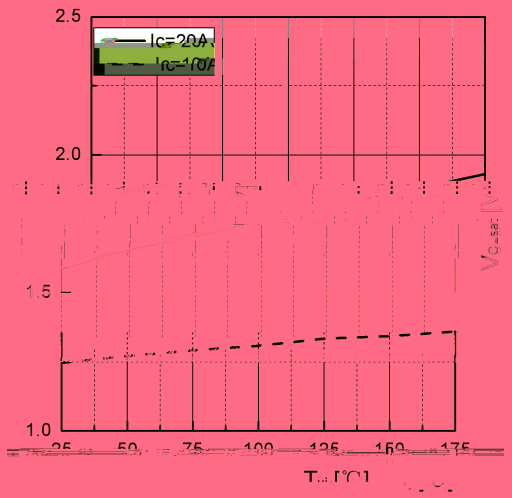


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

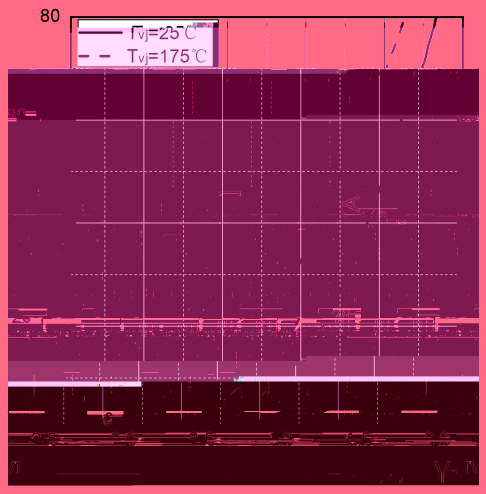


Fig 8. Typical $_{F}$ as a function of $_{F}$

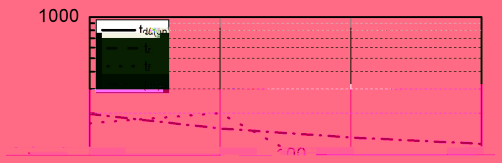


Fig 9. Typical switching time as a function of $_{C}$

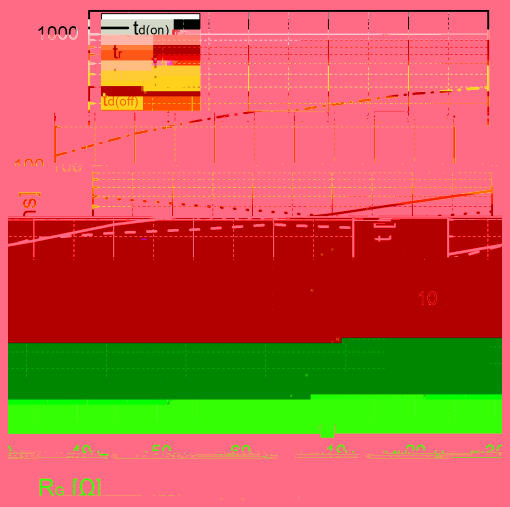


Fig 10. Typical switching times as a function of $_{G}$

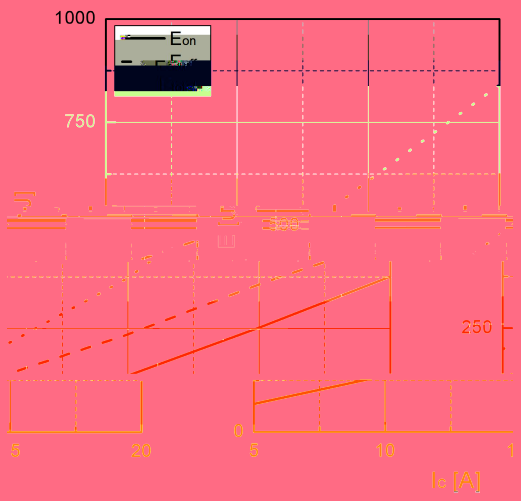


Fig 11. Typical switching energy losses as a function of $_{C}$

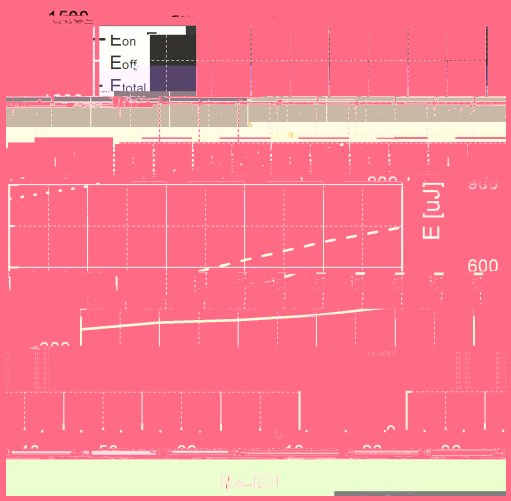


Fig 12. Typical switching energy losses as a function of $_{G}$

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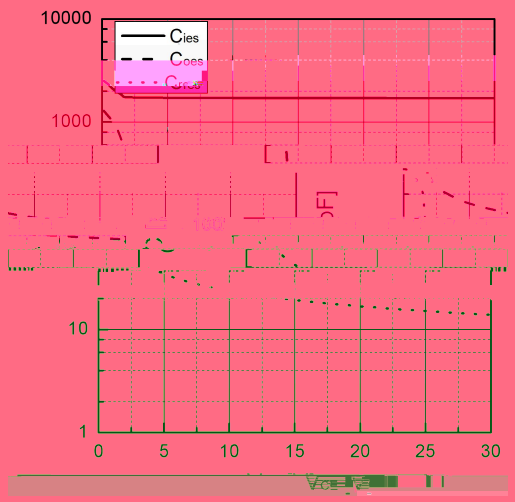


Fig 13. Typical capacitance as a function of $_{CE}$ (f=1Mhz, $_{GE}$=0V)

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Date	Revision	Changes
2023-12-05	Rev 1.0	Release of the datasheet.
2024-05-20	Rev 1.1	Update
2025-03-06	Rev 1.2	Character update

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