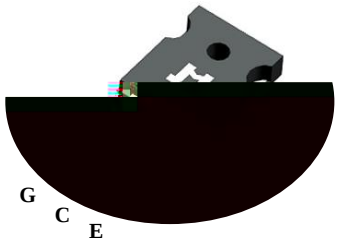
Key performance:

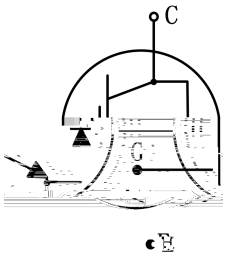
- V_{CE} =650V
- I_C=40A@ T_C=100
- $V_{CE(sat)}$=1.9V

TO-247i



Features:

- Trench and field-stop technology.
- Easy parallel switching capability.



Benefits:

- High efficiency for inverters.
- High ruggedness performance.
- RoHS compliant.

Applications:

- PFC applications
- Welding machines

Package parameters

Type	Marking	Package	Packaging Method
JJT40N65UK	T4065UK	TO-247i	Tube

Symbol	Parameter	Values	Unit
$_{CES}$	Colle		

Symbol	Parameter	Test condition	Values			Unit
			Min.	Typ.	Max.	
	ollector-emitter breakdown voltage	$_{GE}$=0V, I_C=250μA	650	-	-	V
CES	Collector-emitter leakage current	$_{CE}$=650V, $_{GE}$=0V	-	-	50	μA
	Gate leakage current, forward	$_{GE}$=20V, $_{CE}$=0V	-	-	100	nA
CES	Gate leakage current, reverse	$_{GE}$=-20V, $_{CE}$=0V	-	-	-100	nA
G(th)						

Switching characteristics

Symbol	Parameter	Test condition	Values			Unit
			Min.	Typ.	Max.	
d(on)	Turn-on delay time	$_{CC}$=400V $_{GE}$=0/15V $_{C}$=40A $_{G}$=10 Inductive load	-	32	-	ns
r	Rise time		-	55	-	ns
d(off)	Turn-off delay time		-	106	-	ns
f	Fall time		-	51	-	ns
on	Turn-on energy		-	0.9	-	mJ
off	Turn-off energy		-	0.5	-	mJ
ts	Total switching energy		-	1.4	-	mJ
d(on)	Turn-on delay time	$_{CC}$=400V $_{GE}$=0/15V $_{C}$=40A $_{G}$=10 Inductive load $_{vj}$=175	-	28	-	ns
r	Rise time		-	52	-	ns
d(off)	Turn-off delay time		-	128	-	ns
f	Fall time		-	75	-	ns
on	Turn-on energy		-	1.4	-	mJ
off	Turn-off energy		-	0.7	-	mJ
ts	Total switching energy		-	2.1	-	mJ

Typical performance characteristics

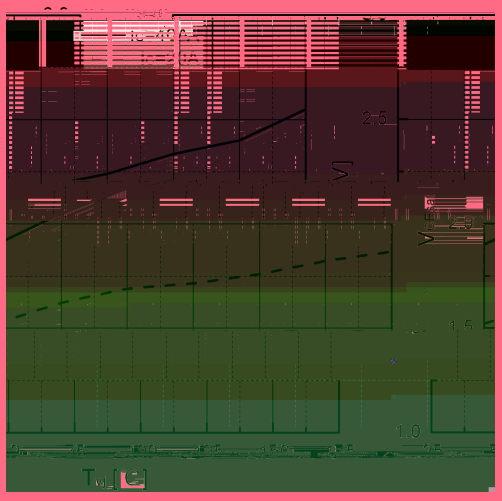


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

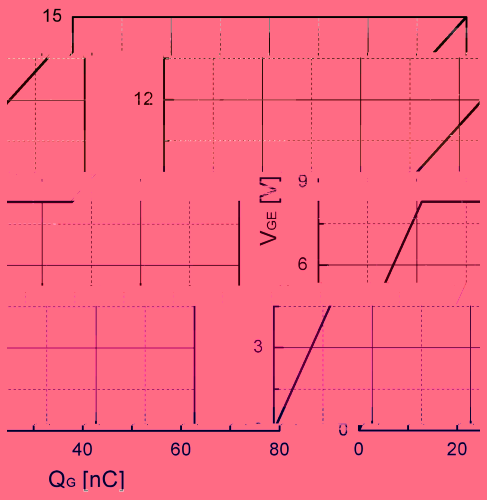


Fig 8. Typical Gate charge

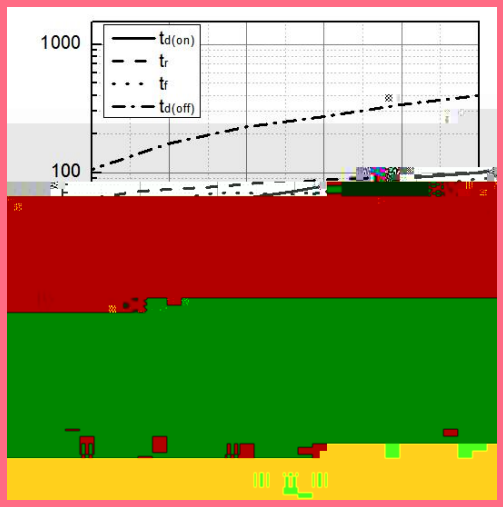


Fig 9. Typical switching times as a function of $_{G}$

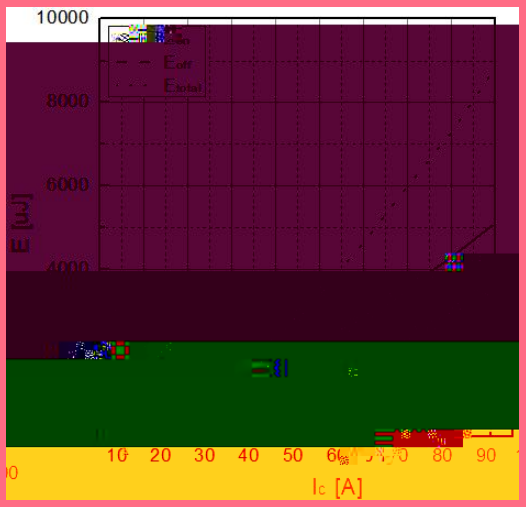


Fig 10. Typical switching energy losses as a function of $_{C}$

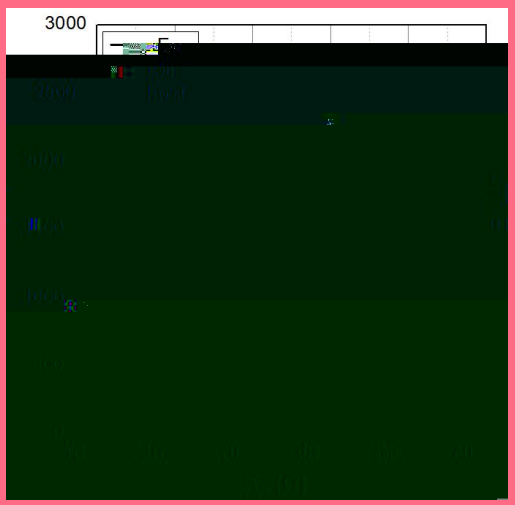


Fig 11. Typical switching energy losses as a function of $_{G}$

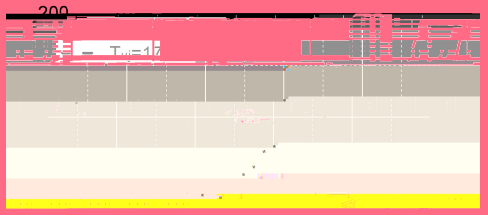


Fig 12. Typical $_{F}$ as a function of $_{F}$

Date	Revision	Changes
2026-06-01	Rev 1.0	Release of the datasheet

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