- V_{CE} =650V
- I_C=60A@ T_C=100
- $V_{CE(sat)}$=1.9V

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

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

- PFC applications
- Welding machines

Type	Marking	Package	Packaging Method
JJT60N65UK	T6065UK	TO-247i( )	Tube

V_{CES}	Collector-emitter voltage	650	V
V_{GES}	Gate-emitter voltage	±20	V
I_C	Continuous collector current ($_C$=25)	120	A
	Continuous collector current ($_C$=100)	60	A
I_{CM}	Pulsed collector current,		

$_{CES}$	Collector-emitter breakdown voltage	$_{GE}$=0V, I_C=250μA	650	-	-	V
$_{CES}$	Collector-emitter leakage current	$_{CE}$=650V, $_{GE}$=0V	-	-	50	μA
$_{GES}$	Gate leakage current, forward	$_{GE}$=20V, $_{CE}$=0V	-	-	100	nA
	Gate leakage current, reverse	$_{GE}$=-20V, $_{CE}$=0V	-	-	-100	nA
$_{GE(th)}$	Gate-emitter threshold voltage					

Switching characteristics

$t_{d(on)}$	Turn-on delay time	V_{CC}=400V V_{GE}=0/15V I_C=60A R_G=10 Inductive load	-	44	-	ns
t_r	Rise time		-	100	-	ns
$t_{d(off)}$	Turn-off delay time		-	166	-	ns
t_f	Fall time		-	75	-	ns
E_{on}	Turn-on energy		-	2.3	-	mJ
E_{off}	Turn-off energy		-	1.3	-	mJ
E_{ts}	Total switching energy		-	3.6	-	mJ
$t_{d(on)}$	Turn-on delay time	V_{CC}=400V V_{GE}=0/15V I_C=60A R_G=10 Inductive load T_{vj} =175	-	45	-	ns
t_r	Rise time		-	105	-	ns
$t_{d(off)}$	Turn-off delay time		-	180	-	ns
t_f	Fall time		-	76	-	ns
E_{on}	Turn-on energy		-	3.6	-	mJ
E_{off}	Turn-off energy		-	1.6	-	mJ
E_{ts}	Total switching energy		-	5.2	-	mJ

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

$_{F}$	Diode forward voltage	$_{F}$=60A	-	2.5	-	V
		$_{F}$=60A, $_{vj}$=175	-	2.0	-	V
$_{rr}$	Diode reverse recovery time	$_{R}$=400V $_{F}$=60A d $_{F}$/d =-450A/μs	-	78	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	15	-	A
$_{rr}$	Diode reverse recovery charge		-	511	-	nC
$_{rr}$	Diode reverse recovery time	$_{R}$=400V $_{F}$=60A d $_{F}$/d =-450A/μs $_{vj}$=175	-	126	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	26	-	A
$_{rr}$	Diode reverse recovery charge		-	2163	-	nC

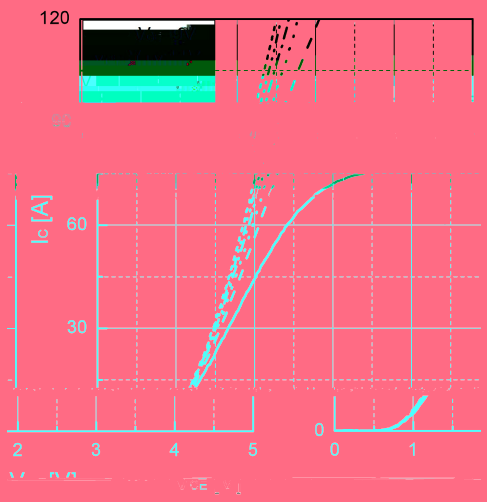


Fig 1. Typical output characteristic (vj=25)

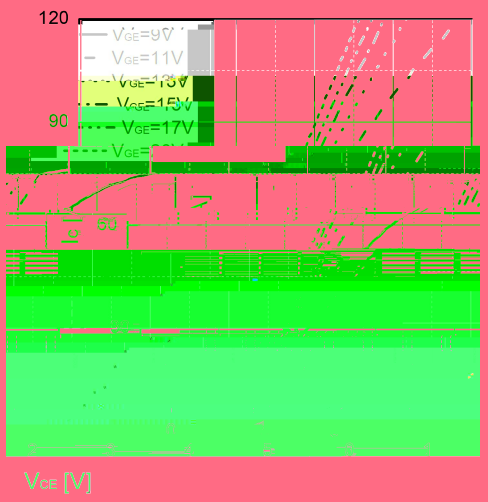


Fig 2. Typical output characteristic(vj=175)

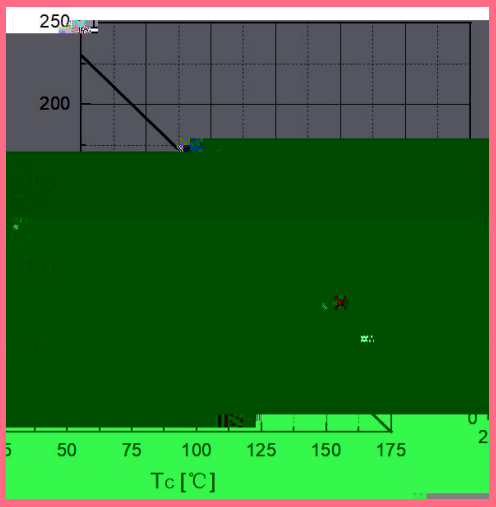


Fig 3. Power dissipation as a function of

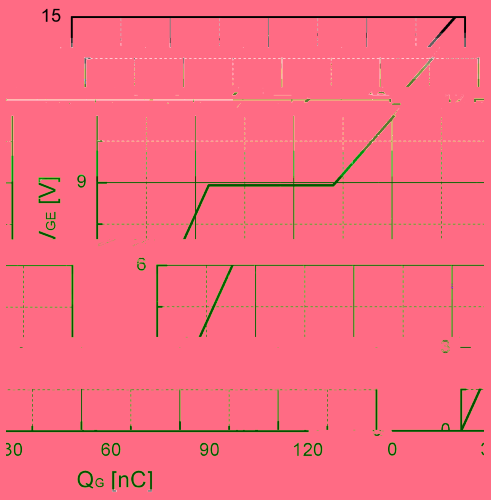


Fig 4. Typical Gate charge

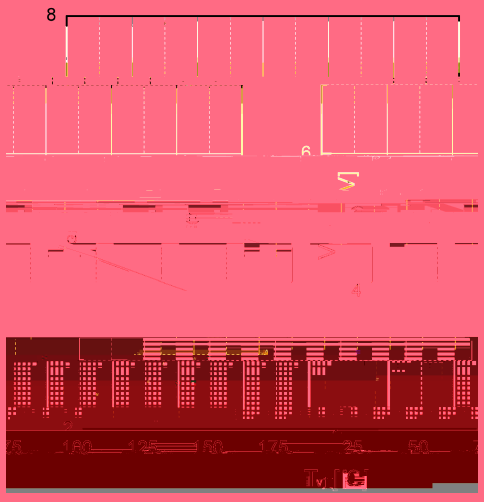


Fig 5. Typical GE(th) as a function of vj (C=1mA)

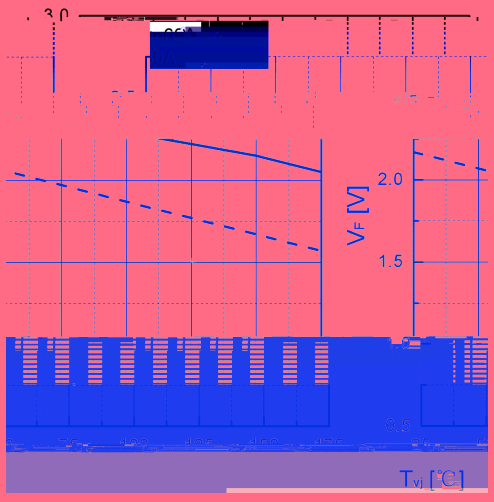


Fig 6. Typical F as a function of vj

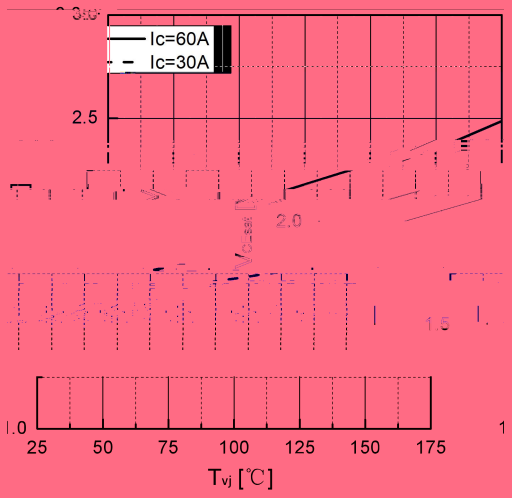


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

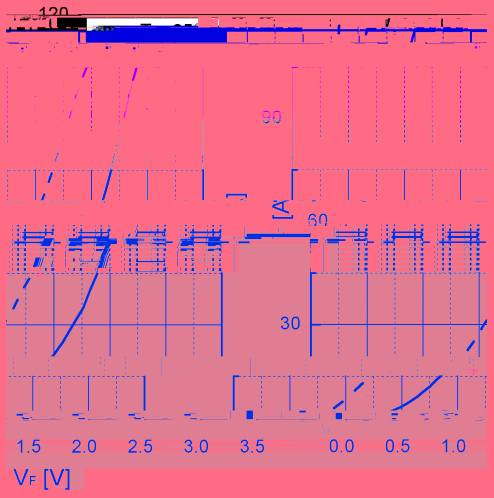


Fig 8. Typical $_{F}$ as a function of $_{F}$

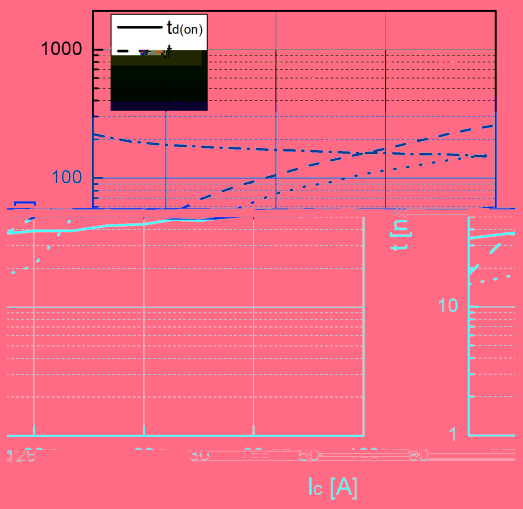


Fig 9. Typical switching time as a function of $_{C}$

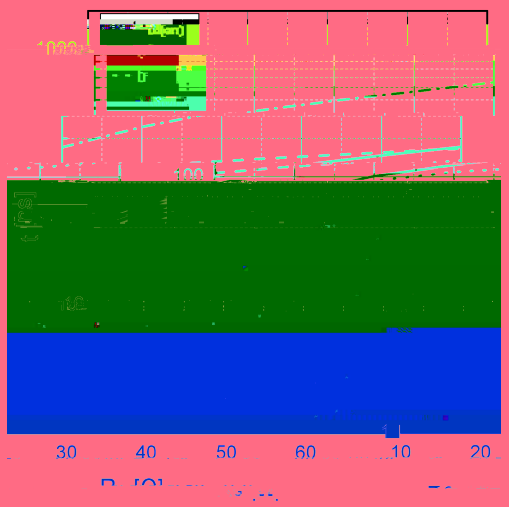


Fig 10. Typical switching times as a function of $_{G}$

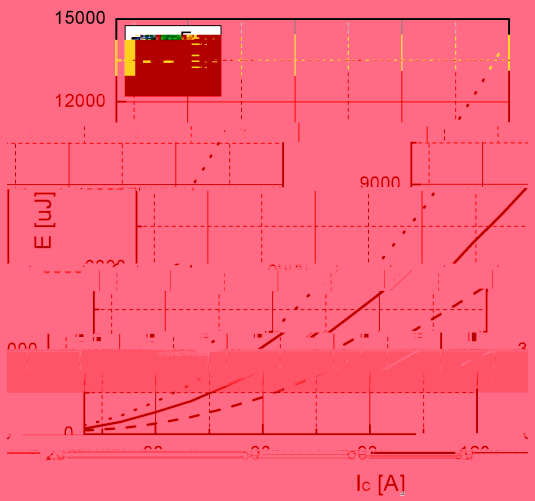


Fig 11. Typical switching energy losses as a function of $_{C}$

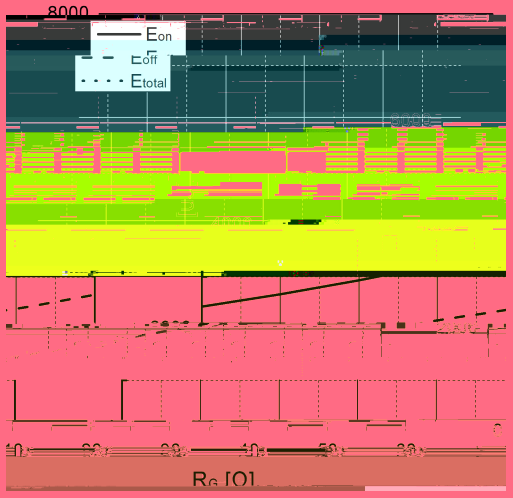


Fig 12. Typical switching energy losses as a function of $_{G}$

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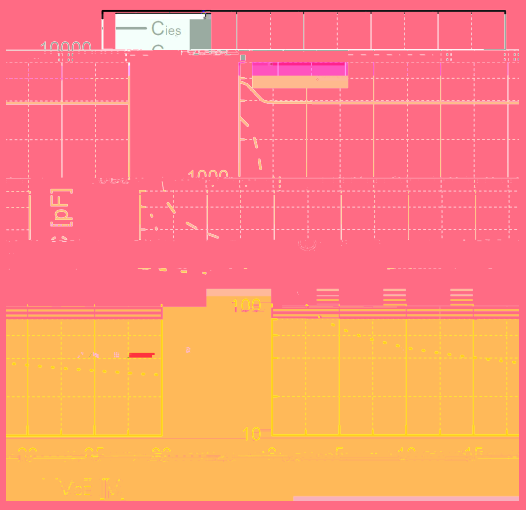


Fig 13. Typical capacitance as a function of $_{CE}$ (f=1Mhz, $_{GE}$=0V)

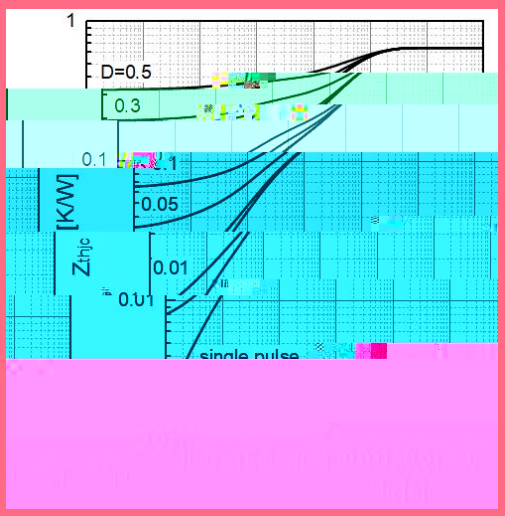


Fig 14. Transient thermal impedance of IGBT

Dimensions

Ref.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.

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Date	Revision	Changes
2026-04-20	Rev 1.0	Preliminary Version
2026-06-25	Rev 1.1	Add thermal

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