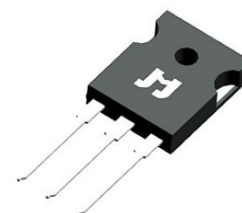


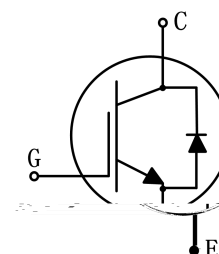
- $V_{CE} = 650V$
- $I_C = 50A @ T_C = 100$
- $V_{CE(sat)} = 1.9V$

TO-247

- 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
JJT50N65UE	T5065UE	TO-247	Tube



CES	Collector-emitter voltage	650	V
GES	Gate-emitter voltage	±20	V
C	Continuous collector current ($T_C=25^\circ\text{C}$)	100	A
	Continuous collector current ($T_C=100^\circ\text{C}$)	50	A
CM	Pulsed collector current, I_C limited by V_{CEmax}	200	A
F	Diode continuous forward current ($T_C=100^\circ\text{C}$)	50	A
FM	Diode maximum current, I_F limited by V_{FMmax}	200	A
tot	Power dissipation ($T_C=25^\circ\text{C}$)	333	W



V_{CES}	Collector-emitter breakdown voltage	$V_{GE}=0V, I_C=250\text{ A}$	650	-	-	V
I_{CES}	Collector-emitter leakage current	$V_{CE}=650V, V_{GE}=0V$	-	-	50	A
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					



d(on) Turn-on delay time - 50 - ns

n

CC=400V
GE=0/15V
C=50A
G=10Ω
Inductive load



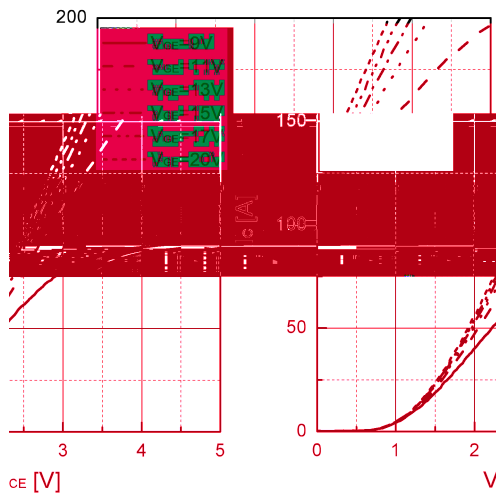


Fig 1. Typical output characteristic ($v_j=25^\circ\text{C}$)

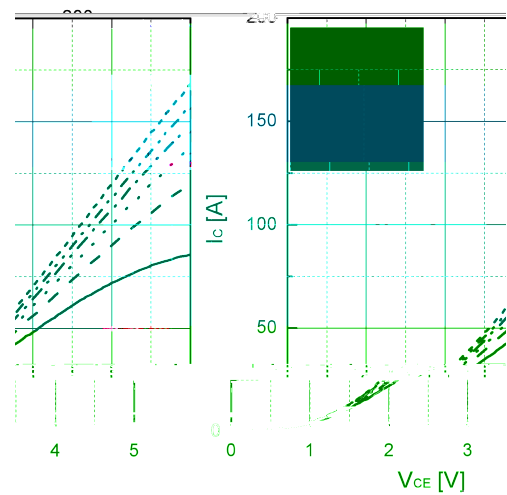


Fig 2. Typical output characteristic($v_j=175^\circ\text{C}$)

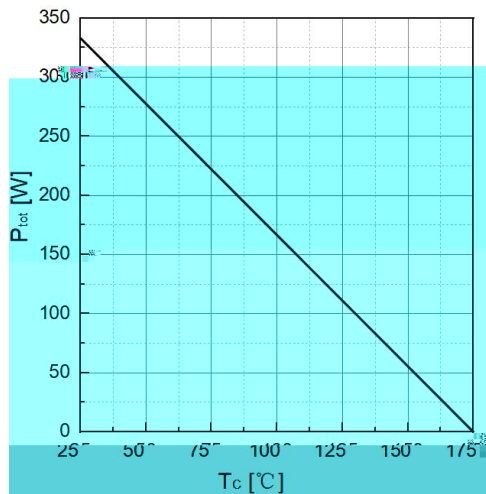


Fig 3. Power dissipation as a function of

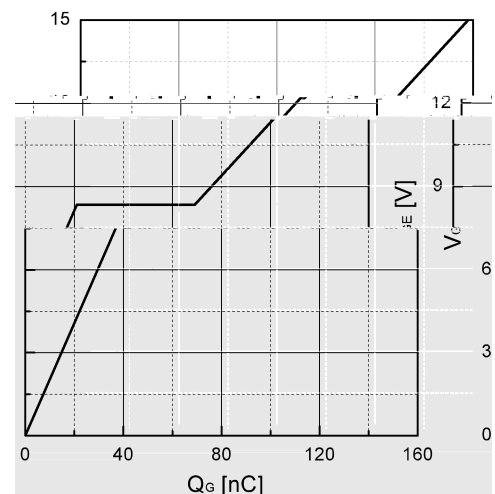


Fig 4. Typical Gate charge

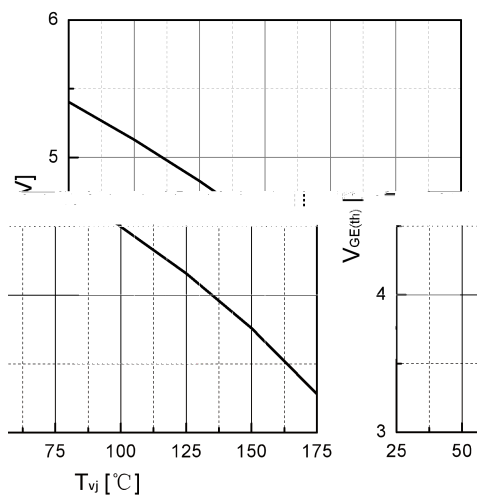


Fig 5. Typical $V_{GE(th)}$ as a function of v_j
($I_C=1\text{mA}$)

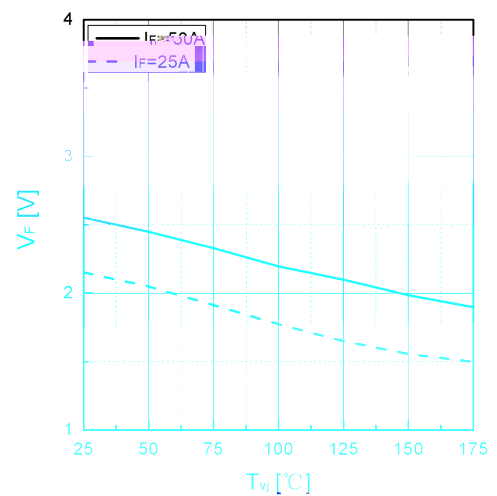


Fig 6. Typical V_F as a function of v_j

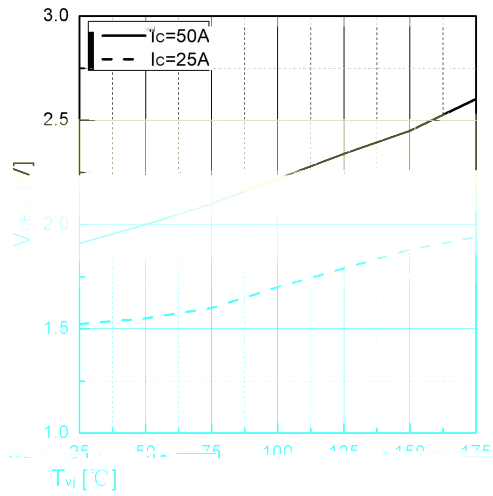


Fig 7. Typical $V_{CE(sat)}$ as a function of T_{vj}

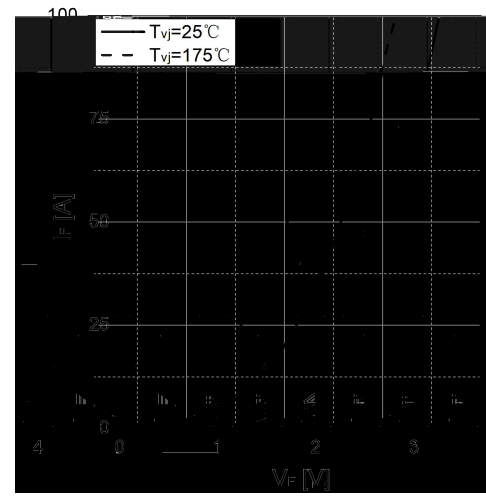


Fig 8. Typical I_F as a function of V_F

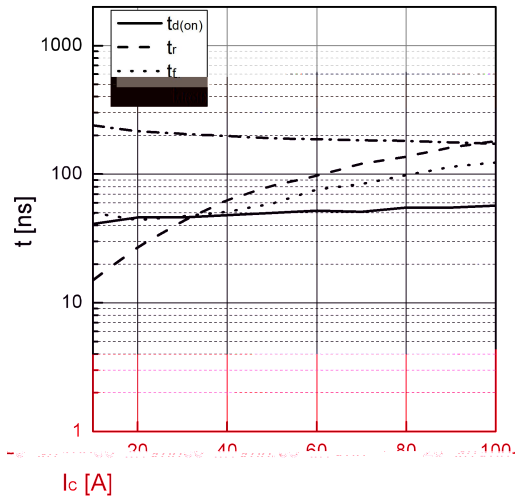


Fig 9. Typical switching time as a function of I_c

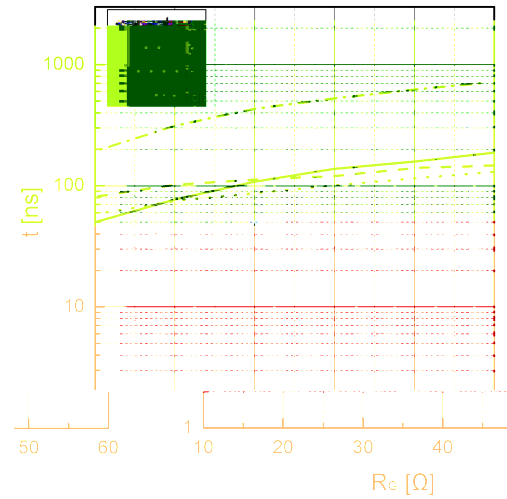


Fig 10. Typical switching times as a function of R_G

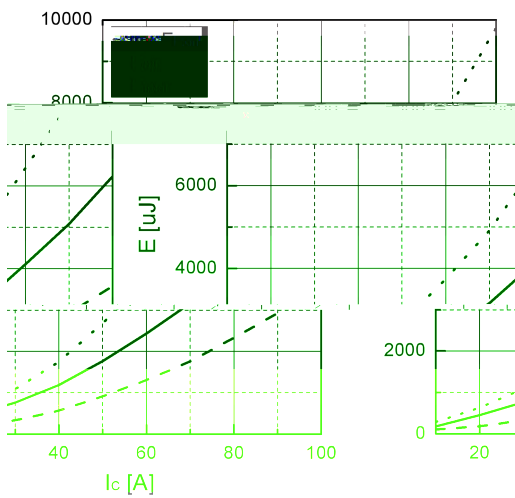


Fig 11. Typical switching energy losses as a function of I_c

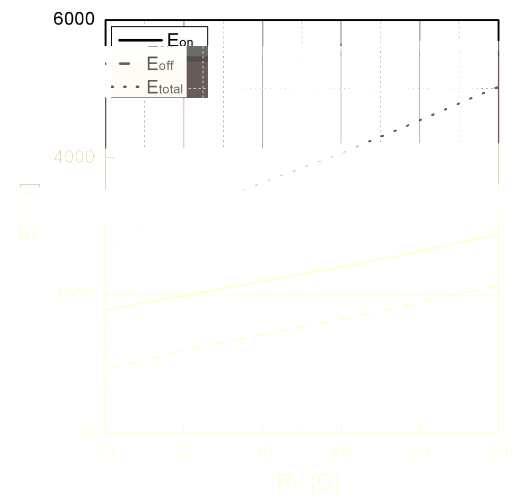


Fig 12. Typical switching energy losses as a function of R_G

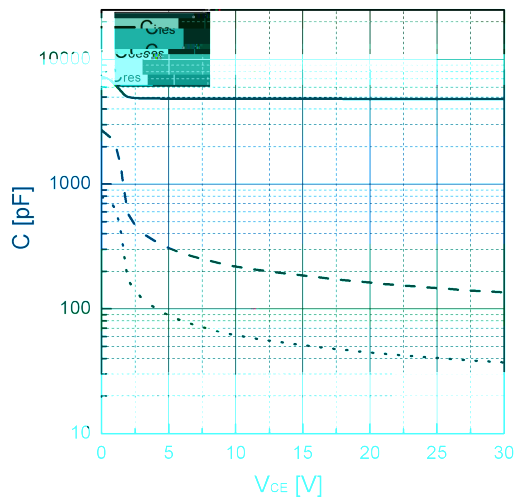


Fig 13. Typical capacitance as a function of V_{CE}
($f=1\text{MHz}$, $V_{GE}=0\text{V}$)

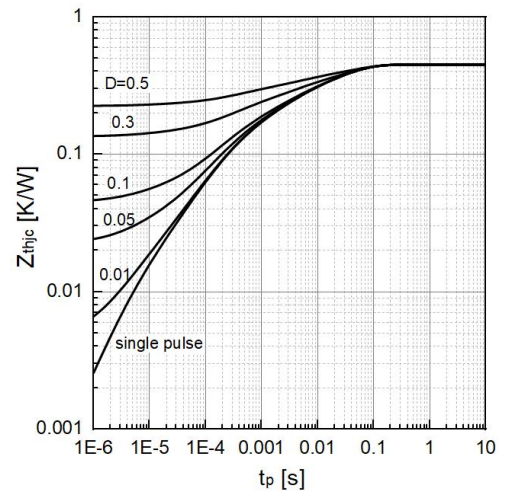


Fig 14. Transient thermal impedance of IGBT



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.50	15.80	16.10	0.610	0.622	0.634
B	20.80	21.00	21.20	0.819	0.827	0.835
C	19.70	20.00	20.30	0.776	0.787	0.799
D	1.80	2.00	2.20	0.071	0.079	0.087
E	1.90	2.10	2.30	0.075	0.083	0.091
F	1.00	1.20	1.40	0.039	0.047	0.055
G	5.25	-	5.65	0.207	-	0.222
H	4.80	5.00	5.20	0.189	0.197	0.205
J	1.90	2.00	2.10	0.075	0.079	0.083
K	2.20	2.35	2.50	0.087	0.093	0.098
L	0.41	0.60	0.79	0.016	0.024	0.031
M	2.80	3.00	3.20	0.110	0.118	0.126
N	2.90	3.10	3.30	0.114	0.122	0.130



Date	Revision	Changes
2023-12-27	Rev 1.1	Update
2024-05-17	Rev 1.2	Update
2024-06-06	Rev 2.0	Update
2026-06-25	Rev 2.1	Update thermal

PLEASE NOTE - Jiangsu JieJie Microelectronics Co., Ltd ("JJM") reserves the right to amend, correct, modify and enhance the product and/or this document at any time without prior notice. If you intend to purchase this product, please obtain the latest information available before placing your order. The sale of JJM products is governed by JJM's prevailing terms and conditions at the time

D
- 1 9 p u 11

