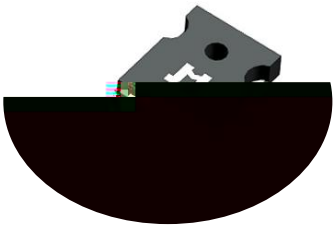
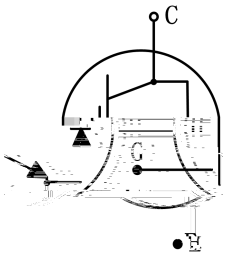
- V_{CE}=650V
- I_C=50A@ T_C=100
- $V_{CE(sat)}$=1.9V

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

V_{CES}	Collector-emitter voltage	650	V
V_{GES}	Gate-emitter voltage	±20	V
I_C	Continuous collector current (T_C=25)	100	A
	Continuous collector current (T_C=100)	50	A
I_{CM}	Pulsed collector current, t_p limited by T_{vjmax}	200	A
I_F	Diode continuous forward current (T_C=100)	50	A
I_{FM}	Diode maximum current, t_p limited by T_{vjmax}	200	A
P_{tot}	Power dissipation (T_C=25)	333	W

A dc f a c edad bec eadca e .

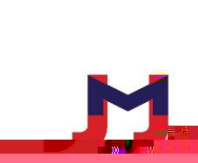
$_{CES}$	Collector-emitter breakdown voltage	$_{GE}$=0V, I_C=250μA	650	-	-	V
$_{CES}$	Collector-emitter leakage current	$_{CE}$=650V, $_{GE}$=0V	-	-	50	μA
$_{GES}$	Gate leakage current, forward	$_{GE}$=20V, $_{CE}$=0V	-	-	100	nA
	Gate leakage current, reverse	$_{GE}$=-20V, $_{CE}$=0V	-	-	-100	nA
$_{GE(th)}$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

$t_{d(on)}$	Turn-on delay time	-	50	-	ns

t_n

V_{CC}=400V
V_{GE}=0/15V
I_C=50A
R_G=10
Inductive load

A dc f a c edad bec eadca e .



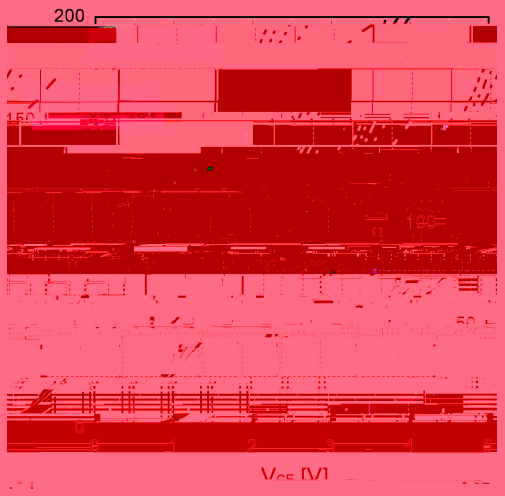


Fig 1. Typical output characteristic ($_{vj}$=25)

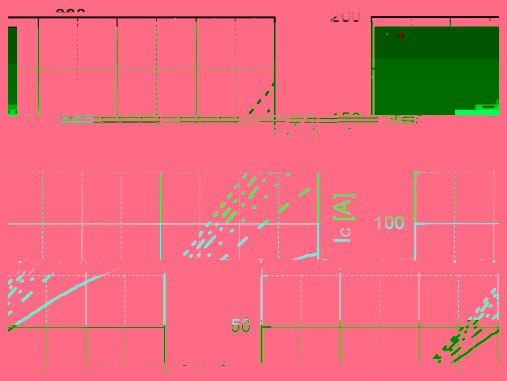


Fig 2. Typical output characteristic($_{vj}$=175)

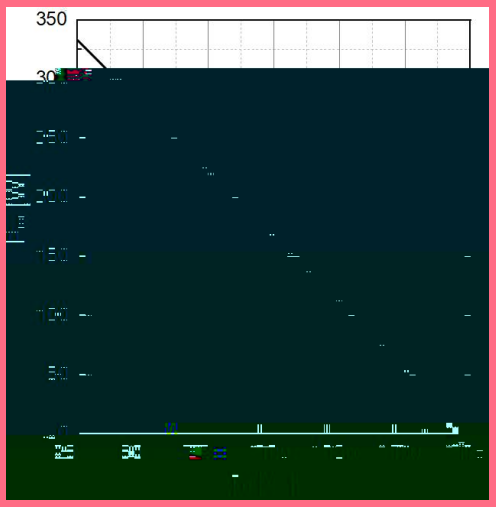


Fig 3. Power dissipation as a function of

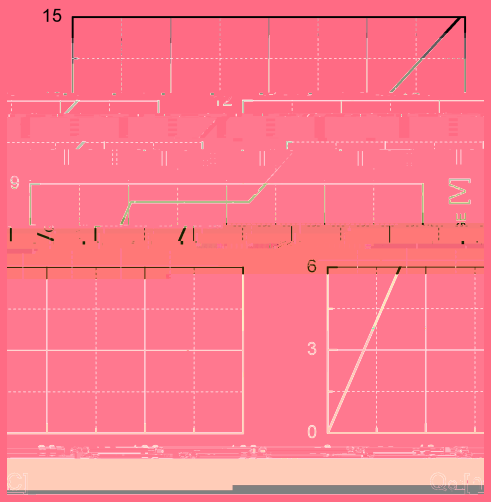


Fig 4. Typical Gate charge

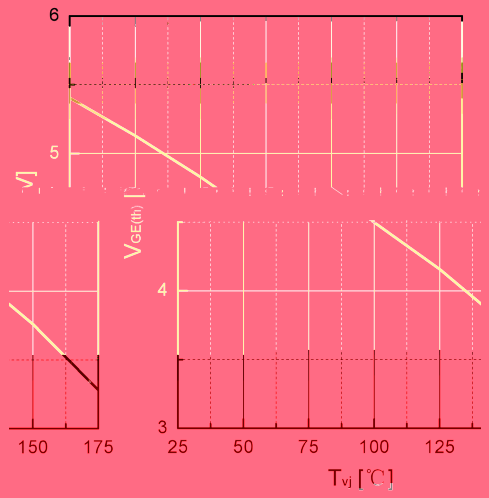


Fig 5. Typical $_{GE(th)}$ as a function of $_{vj}$ ($_{C}$=1mA)

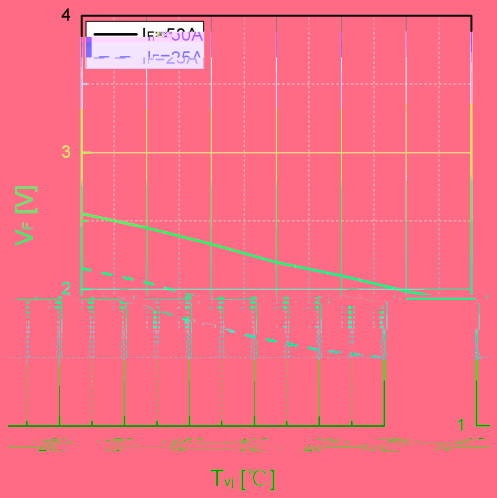


Fig 6. Typical $_{F}$ as a function of $_{vj}$

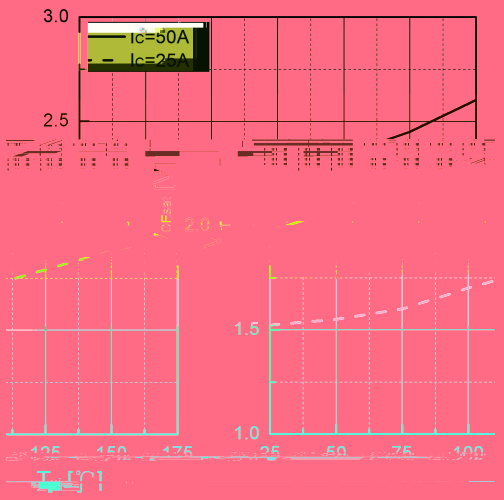


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

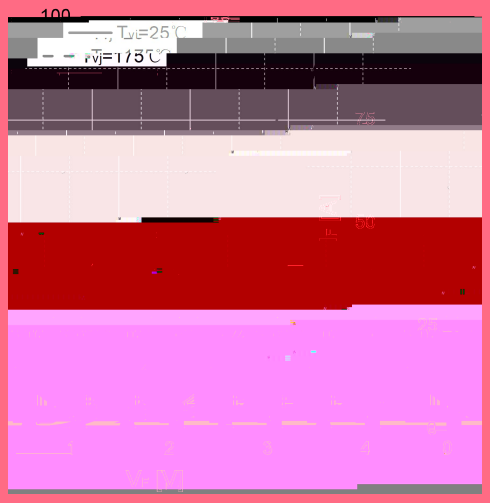


Fig 8. Typical $_{F}$ as a function of $_{F}$

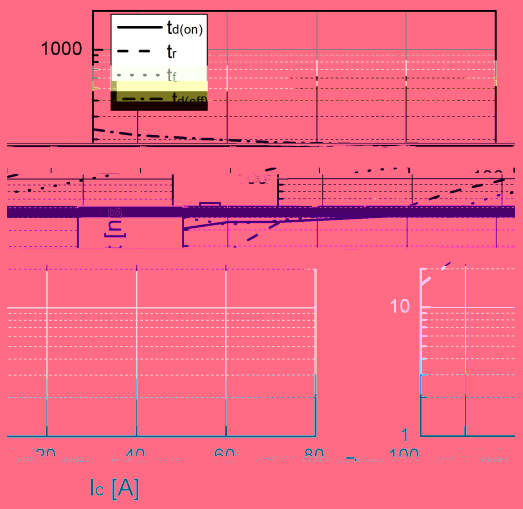


Fig 9. Typical switching time as a function of $_{C}$

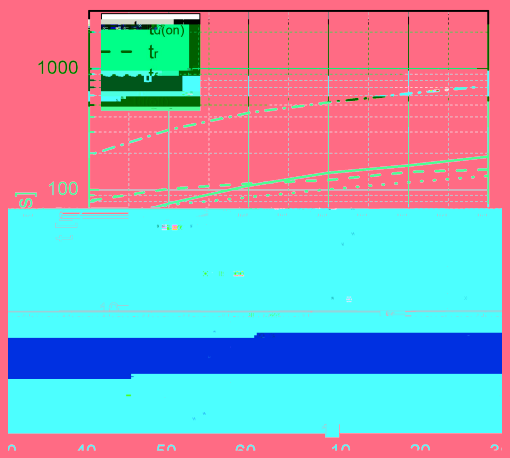


Fig 10. Typical switching times as a function of $_{G}$

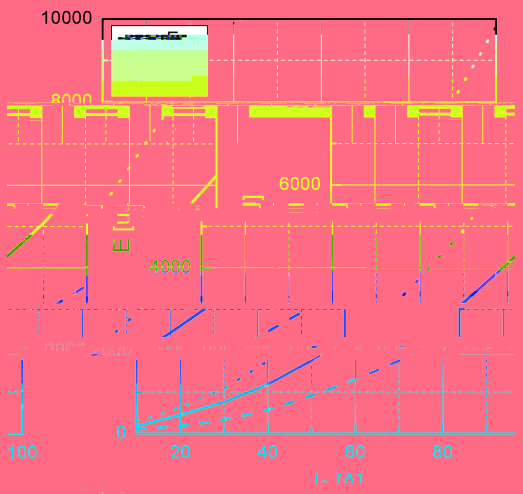


Fig 11. Typical switching energy losses as a function of $_{C}$

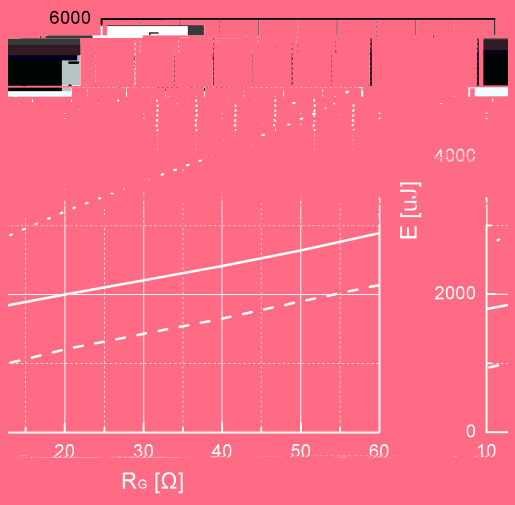


Fig 12. Typical switching energy losses as a function of $_{G}$

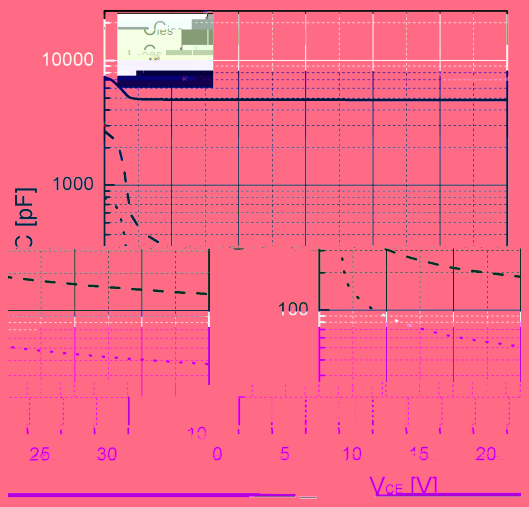


Fig 13. Typical capacitance as a function of $_{CE}$ (f=1Mhz, $_{GE}$=0V)

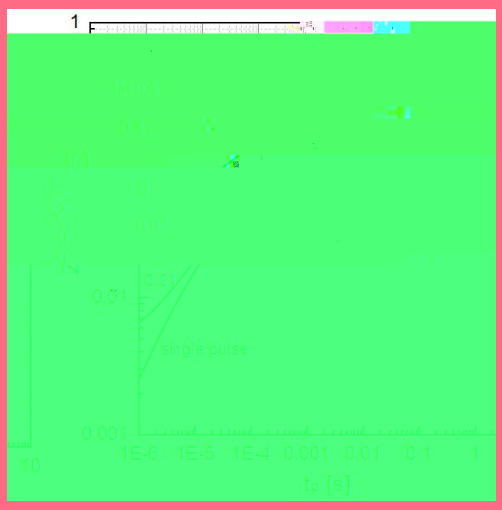


Fig 14. Transient thermal impedance of IGBT

Dimensions

Ref.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
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	2		2	2	2

A d c f a c edad bec e a d ca e .

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

A dc f a c edad bec e ad ca e .