:

- $_{CE}$ =1350V
- $_{C}$=40A@ $_{C}$=100
- $_{CE(sat)}$=2.0V

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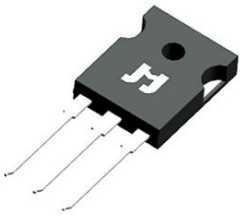
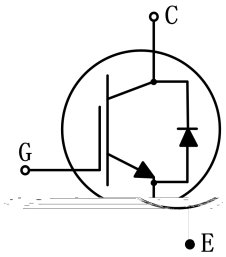


:

- Trench and field-stop technology
- High speed switching
- Positive VCE (sat) temperature coefficient.
- Fast switching and short tail current.
- High ruggedness performance



A :

- Induction cooking
- Resonant converters

Type	Marking	Package	Packaging Method
JJT40N135UE	T40135UE	TO-247	Tube

[redacted]

V_{CES}	Collector-emitter voltage	1350	V
V_{GES}	Gate-emitter voltage	±20	V
I_C	Continuous collector current (T_C=25)	80	A
	Continuous collector current (T_C=100)	40	A
I_{CM}	Pulsed collector current, t_p limited by T_{vjmax}	160	A
I_F	Diode continuous forward current (T_C=100)	40	A
I_{FM}	Diode maximum current, t_p limited by T_{vjmax}	160	A
P_{tot}	Power dissipation (T_C=25)	469	W
	Power dissipation (T_C=100)	235	W
T_{vj}	Operating junction temperature range	-40 to +175	
T_{stg}	Storage temperature range	-55 to +150	

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

Static characteristics

			.	.	.	
$_{CES}$	Collector-emitter breakdown voltage	$_{GE}$=0V, I_C=250 A	1350	-	-	V
$_{CES}$	Collector-emitter leakage current	$_{CE}$=1350V, $_{GE}$=0V	-	-	100	A
$_{GES}$	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	$_{GE}$= $_{CE}$, $_{C}$=1mA	4.7	5.7	6.7	V
$_{CE(sat)}$	Collector-emitter saturation voltage	$_{GE}$=15 V, $_{C}$=40A	-	2.0	-	V
		$_{GE}$=15V, $_{C}$=40A, $_{vj}$=175	-	2.7	-	V

Dynamic characteristics

			.	.	.	
$_{ies}$	Input capacitance	$_{CE}$=30V $_{GE}$=0V =1MHz	-	2014	-	pF
$_{oes}$	Output capacitance		-	99	-	pF
$_{res}$	Reverse transfer capacitance		-	20	-	pF
$_{g}$	Total gate charge	$_{CC}$=1080V =15V =40A	-	121	-	nC

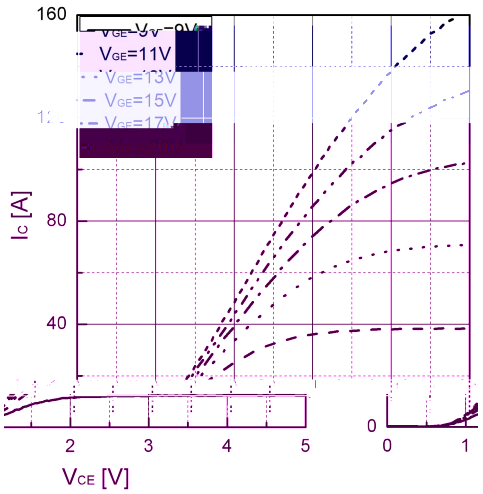


Fig 1. Typical output characteristic (vj=25)

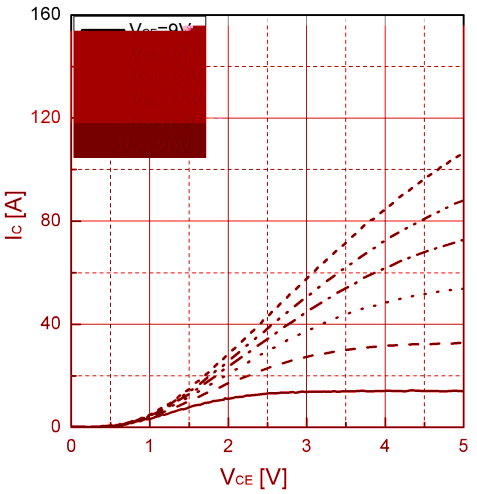


Fig 2. Typical output characteristic(vj=175)

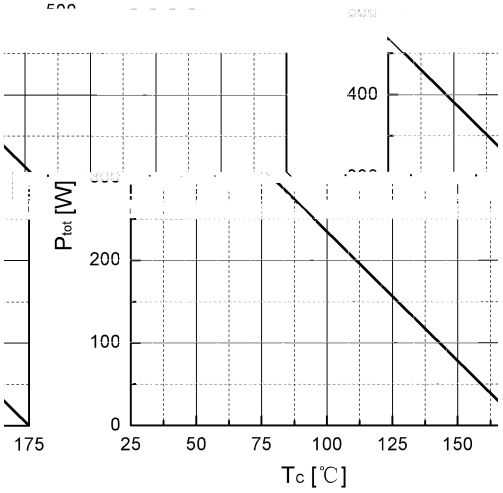


Fig 3. Power dissipation as a function of

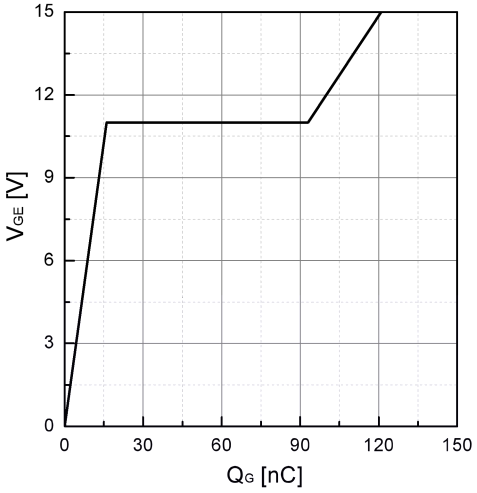


Fig 4. Typical Gate charge

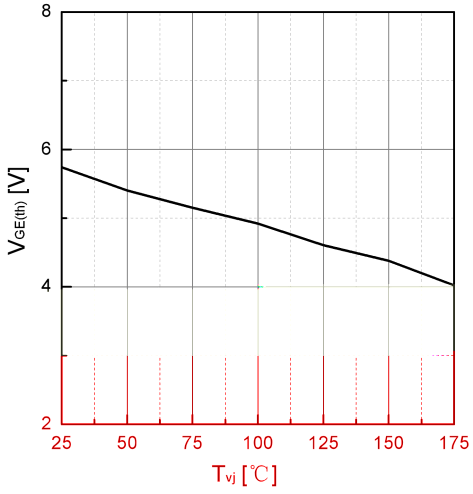


Fig 5. Typical GE(th) as a function of vj (C=1mA)

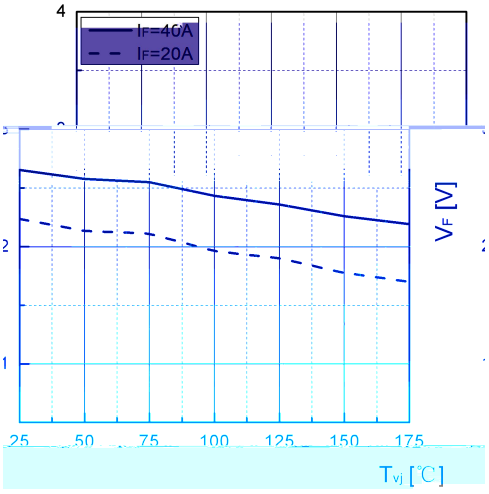


Fig 6. Typical F as a function of vj

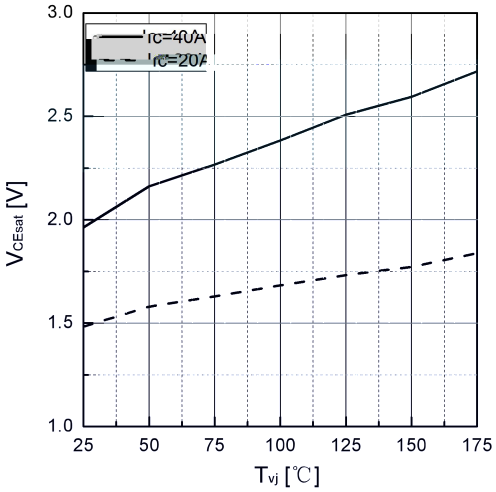


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

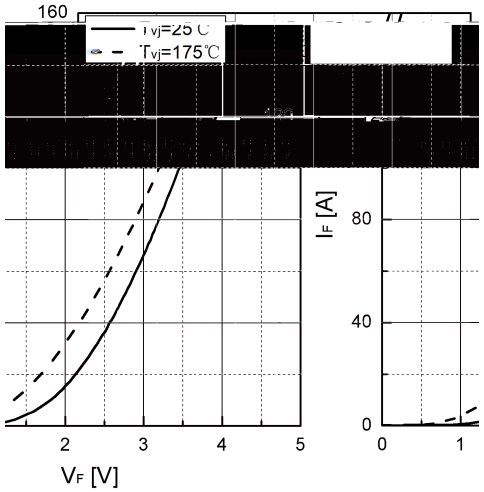


Fig 8. Typical $_{F}$ as a function of $_{F}$

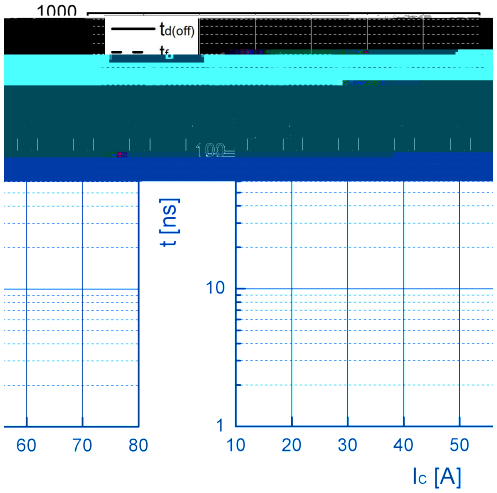


Fig 9. Typical switching time as a function of $_{C}$

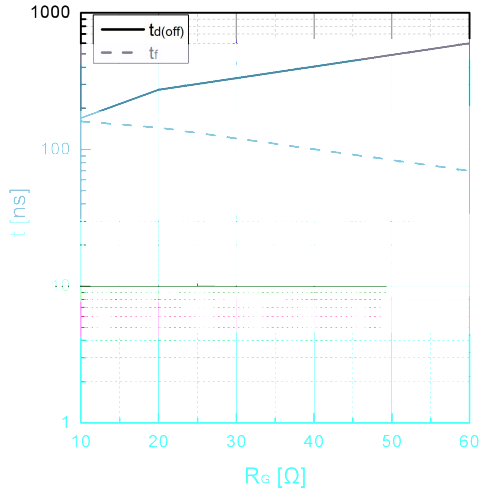


Fig 10. Typical switching times as a function of $_{G}$

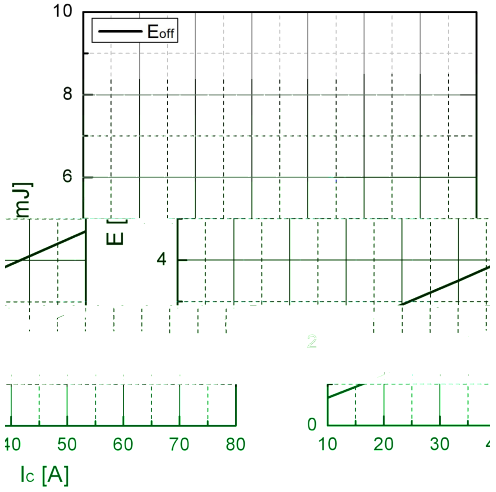


Fig 11. Typical switching energy losses as a function of $_{C}$

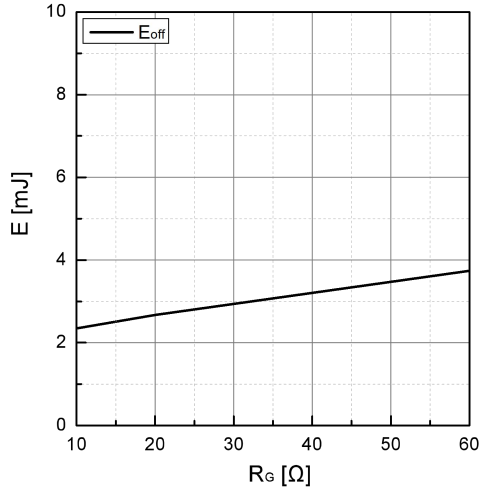


Fig 12. Typical switching energy losses as a function of $_{G}$

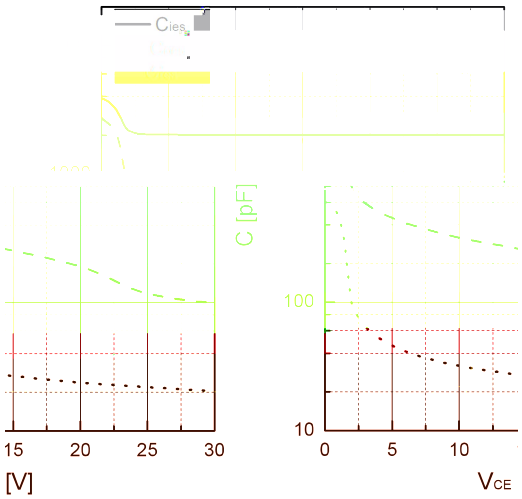


Fig 13. Typical capacitance as a function of $_{CE}$ (f=1Mhz, $_{GE}$=0V)

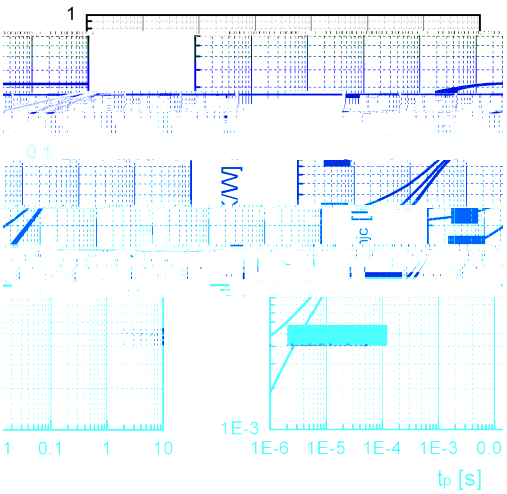


Fig 14. Transient thermal impedance of IGBT

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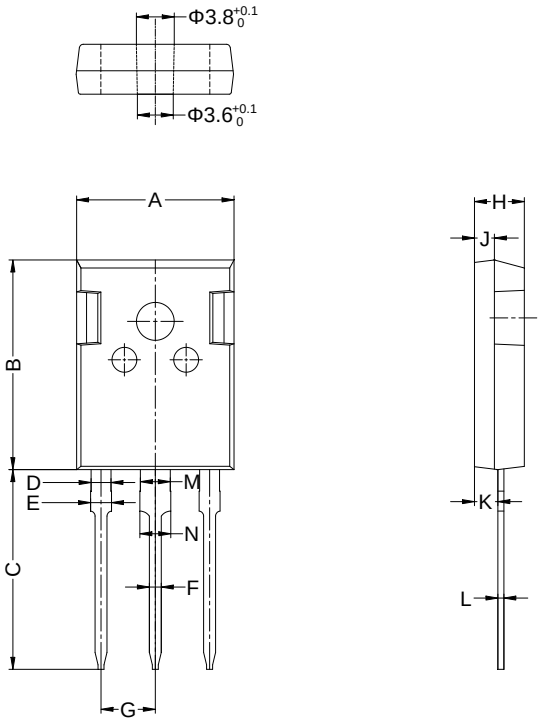

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.50	15.80	16.10	0.610	0.622	0.634
B	20.80	21.00	21.20	0.819	0.827	0.835
C	19.70	20.00	20.30	0.776	0.787	0.799
D	1.80	2.00	2.20	0.071	0.079	0.087
E	1.90	2.10	2.30	0.075	0.083	0.091
F	1.00	1.20	1.40	0.039	0.047	0.055
G	5.25	-	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
2025-02-05	Rev 1.0	Release of the preliminary datasheet.
2025-02-27	Rev 1.1	Add graph and character update