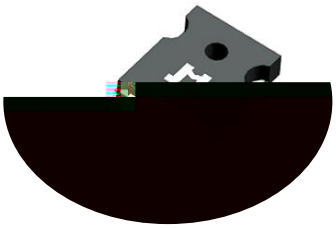
JJMICROELECTRONICS

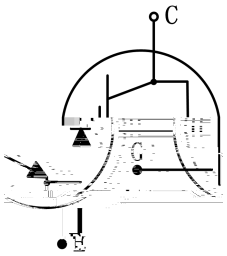
JXT25

- V_{CE}=1200V
- I_C=15A@ T_C=100
- $V_{CE(sat)}$=1.7V

TO-247



- Trench and field-stop technology
- Low collector to emitter saturation voltage
- Easy parallel switching capability
- Short circuit withstands time 10μs
- High ruggedness performance
- RoHS compliant

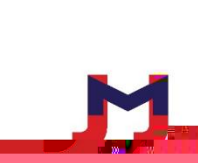


- Inverter

V_{CES}	Collector-emitter voltage	1200	V

CES	Collector-emitter breakdown voltage	GE=0V, I_C=250μA	1200	-	-	V
CES	Collector-emitter leakage current	CE=1200V, GE=0V	-	-	250	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	GE= CE, C=1mA	5.7	6.2	6.5	V
CE(sat)	Collector-emitter saturation voltage	GE=15 V, C=15A	-	1.7	-	V
		GE=15V, C=15A, vj=175	-	2.2	-	V

ies	Input capacitance	CE=30V GE=0V =1MHz	-	1250	-	pF
oes	Output capacitance		-	58	-	pF
res	Reverse transfer capacitance		-	13	-	pF



A d d

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

$_{F}$	Diode forward voltage	$_{F}$=15A	-	2.3	-	V
		$_{F}$=15A $_{vj}$=175	-	1.9	-	V
$_{rr}$	Diode reverse recovery time	$_{R}$=600V $_{F}$=15A d $_{F}$/d =-250A/μs	-	223	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	8	-	A
$_{rr}$	Diode reverse recovery charge		-	718	-	nC
$_{rr}$	Diode reverse recovery time	$_{R}$=600V $_{F}$=15A d $_{F}$/d =-250A/μs $_{vj}$=175	-	396	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	11	-	A
$_{rr}$	Diode reverse recovery charge		-	1700	-	nC

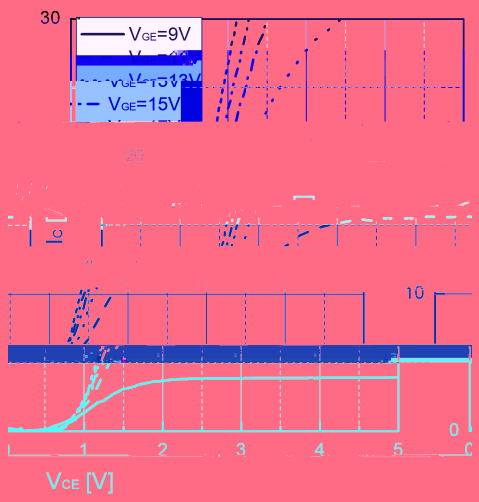


Fig 1. Typical output characteristic ($_{vj}$=25)

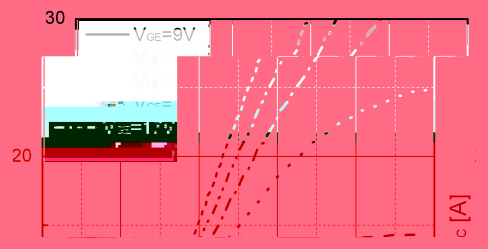


Fig 2. Typical output characteristic($_{vj}$=175)

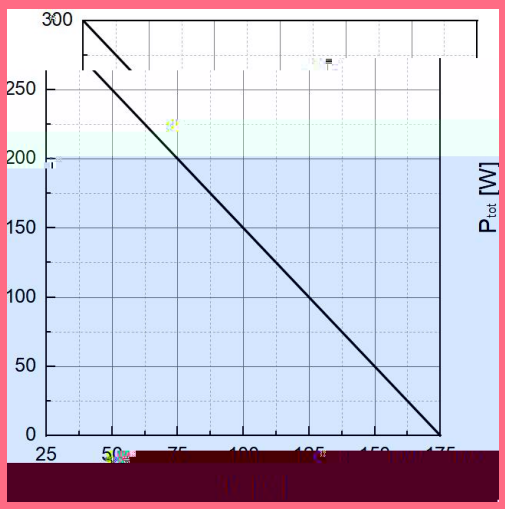


Fig 3. Power dissipation as a function of

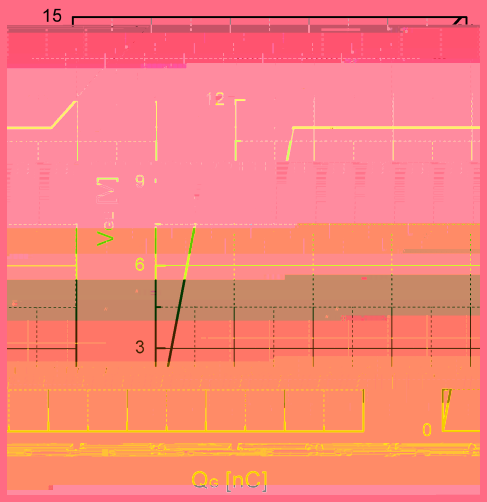


Fig 4. Typical Gate charge

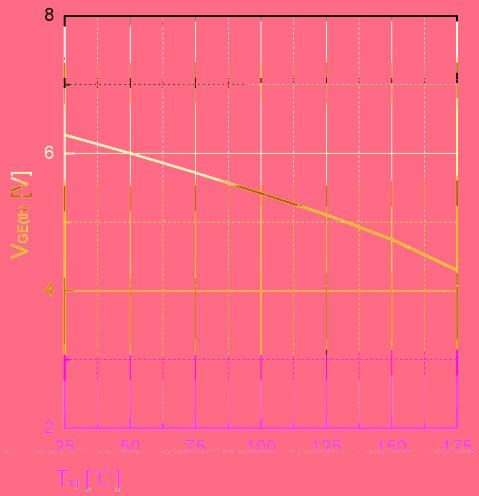


Fig 5. Typical $_{GE(th)}$ as a function of $_{vj}$ ($_{C}$=1mA)

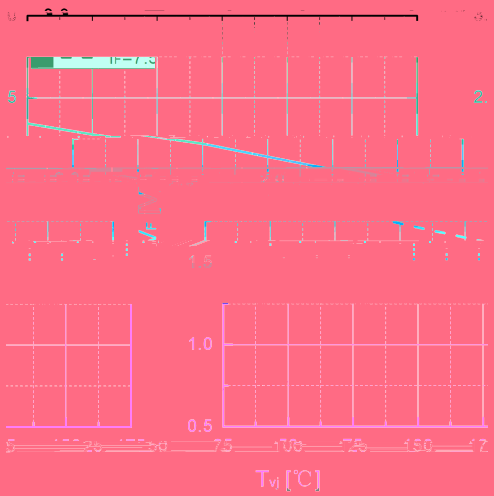
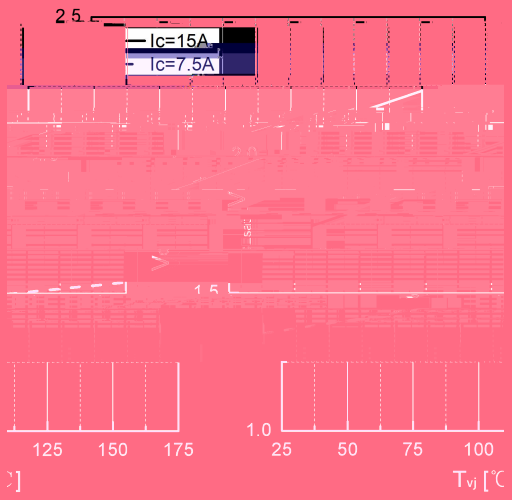


Fig 6. Typical $_{F}$ as a function of $_{vj}$

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



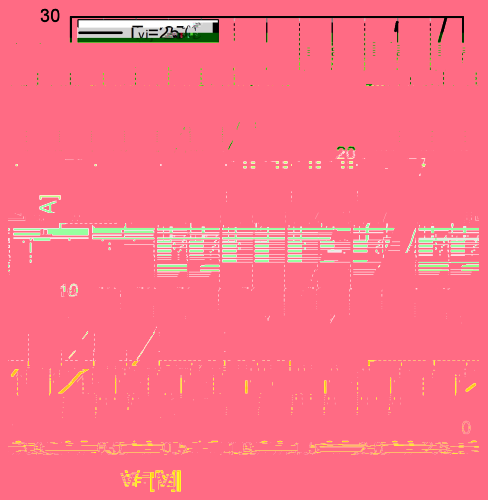
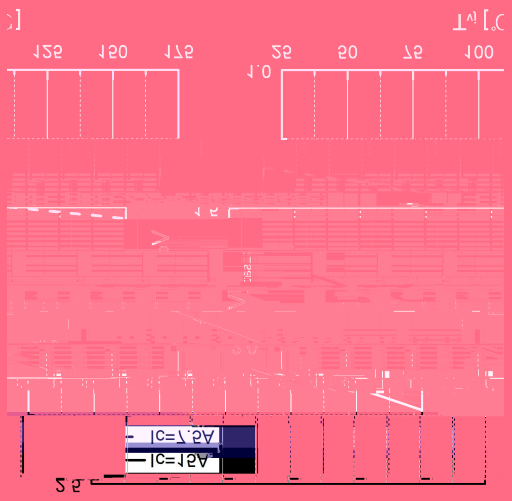


Fig 7. Typical $_{CEss}$



A d c f a c ed a d b ec e a d ca e .

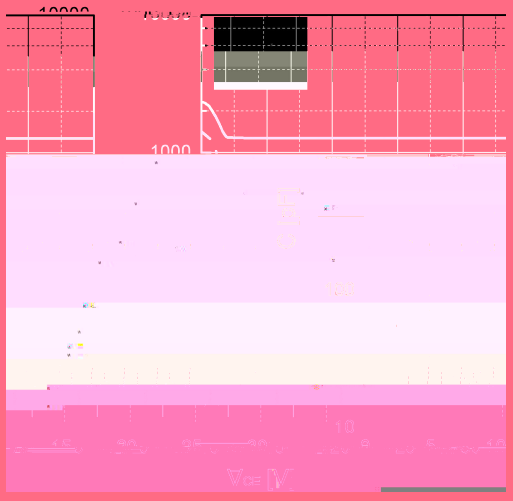


Fig 13. Typical capacitance as a function of $_{CE}$ (f=1Mhz, $_{GE}$=0V)

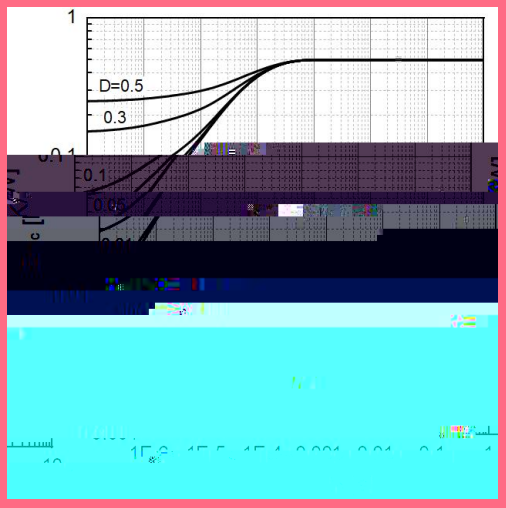
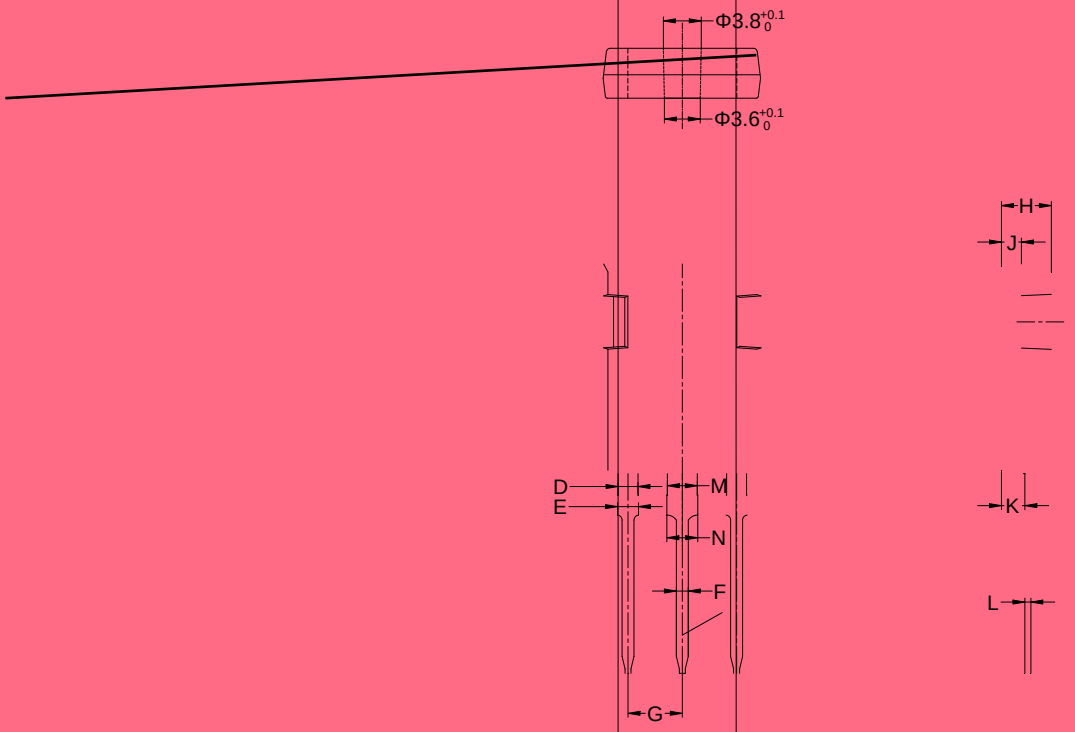


Fig 14. Transient thermal impedance of IGBT

TO-247



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

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

Date	Revision	Change
2023-12-1	Rev 1.0	Release of the datasheet
2024-03-20	Rev 1.1	Update
2024-05-17	Rev 1.2	Update
2026-06-25	Rev 1.3	Update thermal