JJMICROELECTRONICS

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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, $_p$ limited by $_{vjmax}$	240	A
I_F	Diode continuous forward curren		

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$_{CES}$	Collector-emitter breakdown voltage	$_{GE}$=0V, I_C=250μA	650	-	-	V
$_{CES}$	Collector-emitter leakage current	$_{CE}$=650V, $_{GE}$=0V				

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

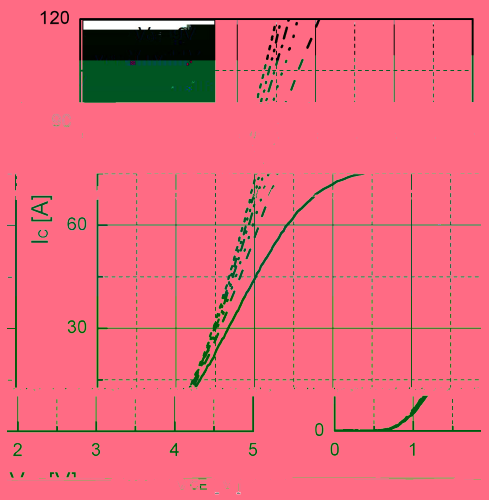


Fig 1. Typical output characteristic (vj=25)

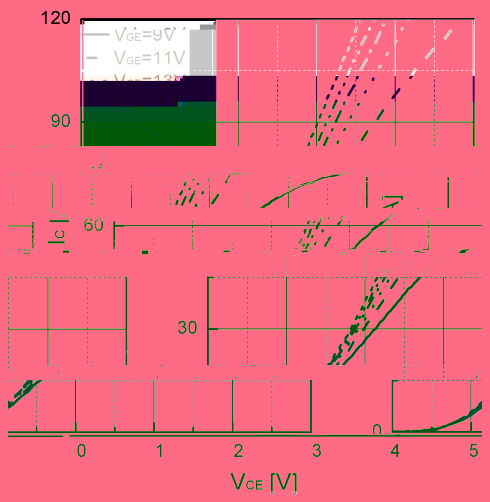


Fig 2. Typical output characteristic(vj=175)

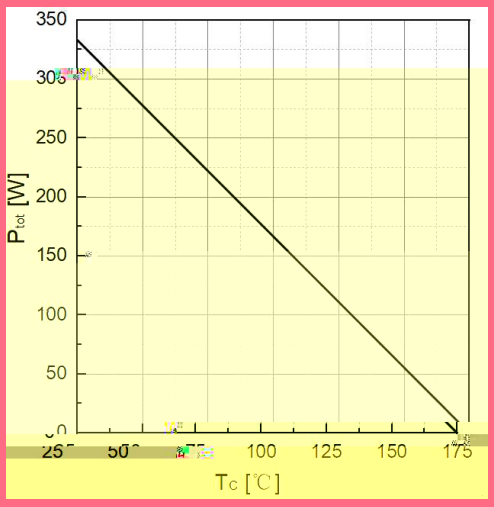


Fig 3. Power dissipation as a function of

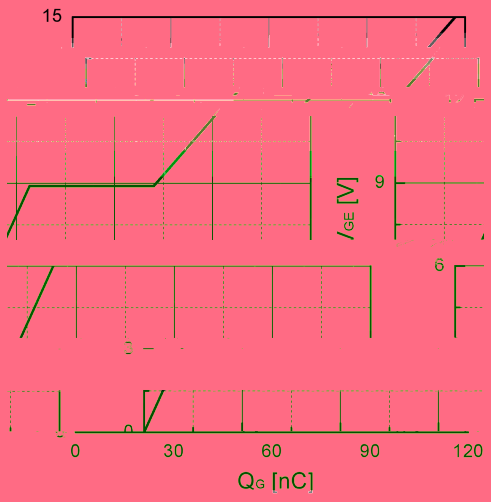


Fig 4. Typical Gate charge

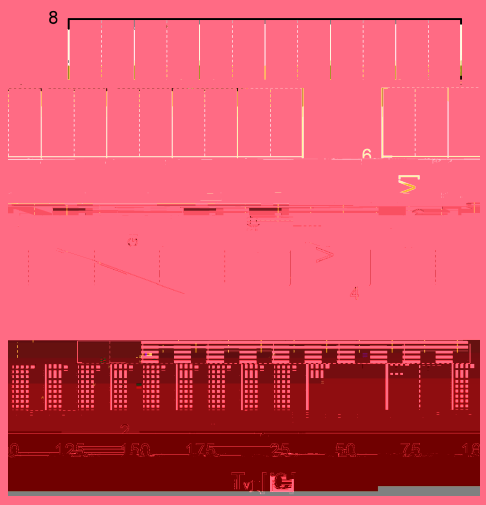


Fig 5. Typical GE(th) as a function of vj (C=1mA)

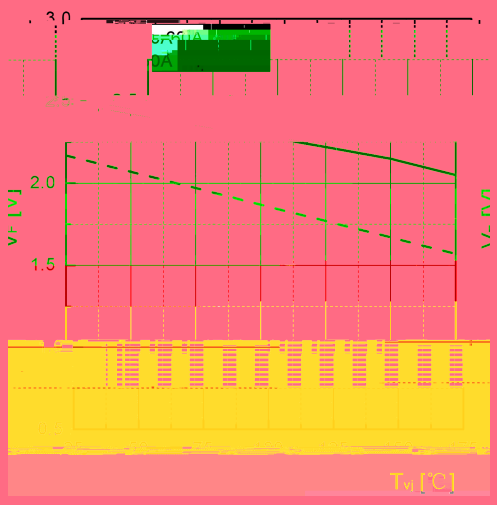
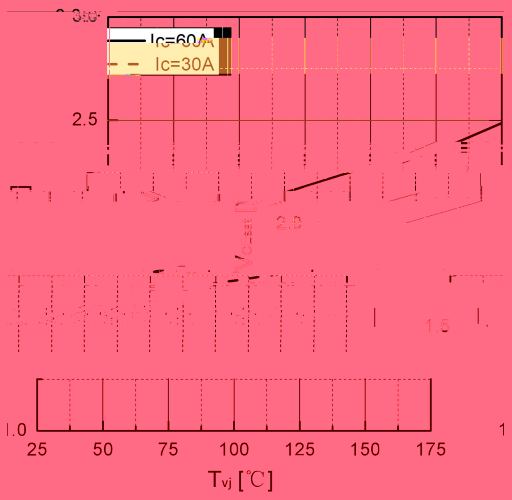


Fig 6. Typical F as a function of vj

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Ic=60A
Ic=30A
2.5
2.0
1.5
1.0
25
50
75
100
125
150
175
Tvj [℃]

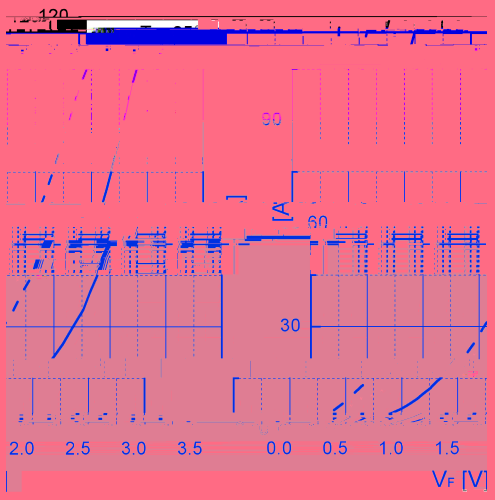

120
90
60
30
[A]
2.0
2.5
3.0
3.5
0.0
0.5
1.0
1.5
VF [V]

Fig 7. Typ

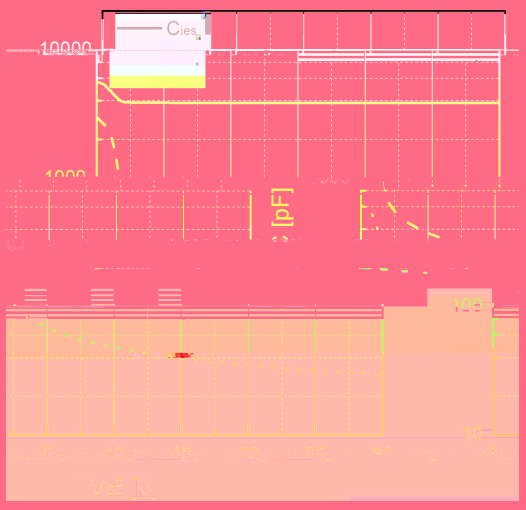


Fig 13. Typical capacitance as a function of $_{CE}$ (f=1Mhz, $_{GE}$=0V)

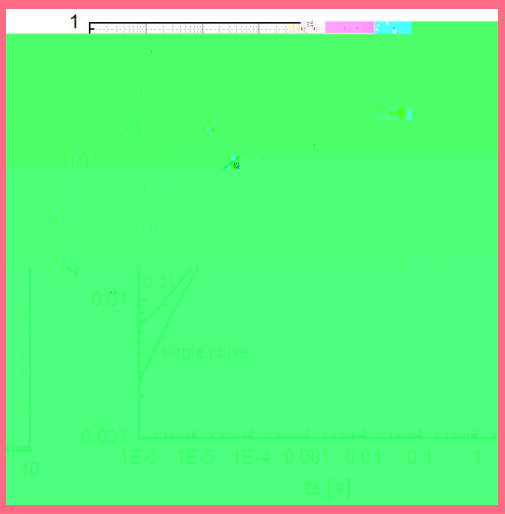


Fig 14. Transient thermal impedance of IGBT

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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	0.07Ƃ	
K	2.20	2.35	2.50	0.087	0.093	0.098
L	0.41	0.60	0.7<	ϰs	0.024	0.031
M	2.80	3.00	3.20	0.110	0.118	0.126

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Date		ges
202		Relea e datashe
2024-03-20	Rev 1.1	Update
2024-05-17	Rev 1.2	Update

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