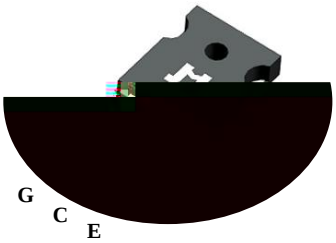
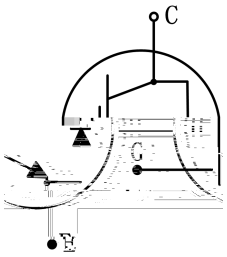
Key performance:

- $_{CE}$ =650V
- $_{C}$=75A@ $_{C}$=100
- $_{CE(sat)}$=1.7V

TO-247





Maximum ratings

Symbol	Parameter	Values	Unit
CES	Collector-emitter voltage	650	V
GES	Gate-emitter voltage	±20	V
	Transient gate-emitter voltage(p 10μ D)	±30	V
C	Continuous collector current (C=25)	150	A
	Continuous collector current (C=100)	75	A
CM	Pulsed collector current, p limited by vjmax	300	A
F	Diode continuous forward current (C=100)	75	A
FM	Diode maximum current, p limited by vjmax	300	A
tot	Power dissipation (C=25)	652	W
	Power dissipation (C=100)	326	W
vj	Operating junction temperature range	-55 to +175	
stg	Storage temperature range	-55 to +175	

Thermal characteristics

Symbol	Parameter	Values		Unit
		Typ.	Max.	
th(j-c)	Thermal resistance, junction to case for IGBT	-	0.23	K/ W
th(j-c)	Thermal resistance, junction to case for Diode	-	0.60	K/ W
th(j-a)	Thermal resistance, junction to ambient	-	40	K/ W

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Symbol	Parameter	Test condition	Values			Unit
			Min.	Typ.	Max.	



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Electrical characteristics of Diode ($_{vj}$=25 unless otherwise specified)

Symbol	Parameter	Test condition	Values			Unit
			Min.	Typ.	Max.	
$_{F}$	Diode forward voltage	$_{F}$=75A	-	1.7	-	V
		$_{F}$=75A, $_{vj}$=175	-	1.4	-	V
$_{rr}$	Diode reverse recovery time	$_{R}$=400V $_{F}$=75A d $_{F}$/d =-450A/μs	-	129	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	14	-	A
$_{rr}$	Diode reverse recovery charge		-	778	-	nC
$_{rr}$	Diode reverse recovery time	$_{R}$=400V $_{F}$=75A d $_{F}$/d =-450A/μs $_{vj}$=175	-	172	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	22	-	A
$_{rr}$	Diode reverse recovery charge		-	2200	-	nC

Typical perfo izeaabil dr x

Typical performance characteristics

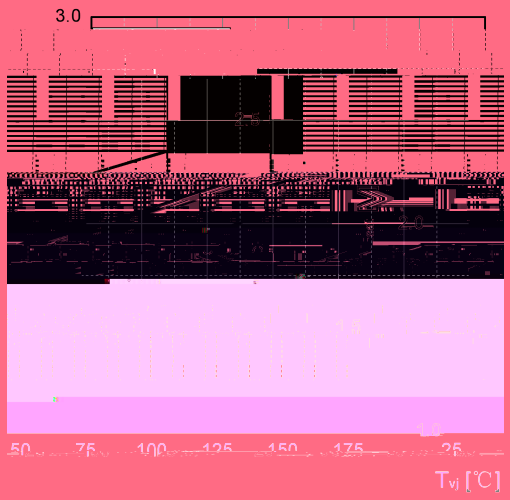


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

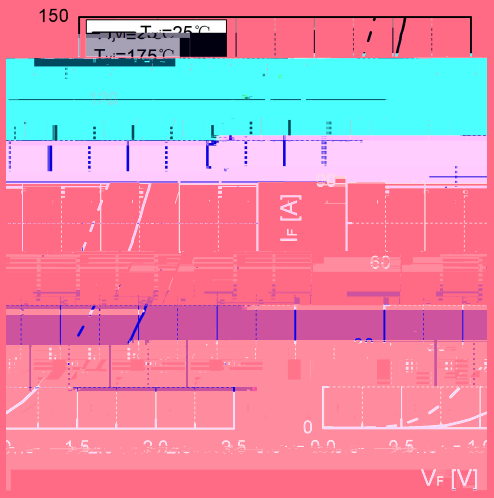


Fig 8. Typical $_{F}$ as a function of $_{F}$

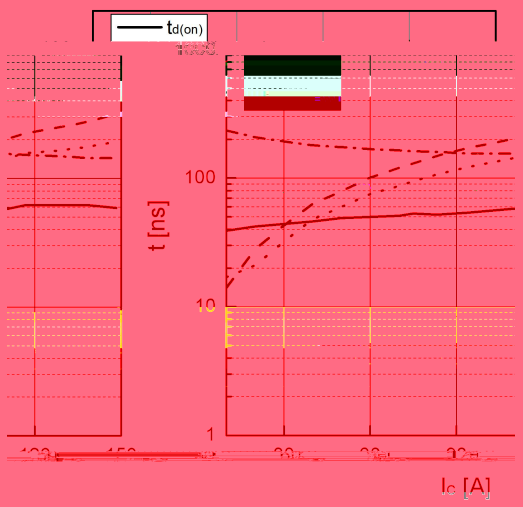
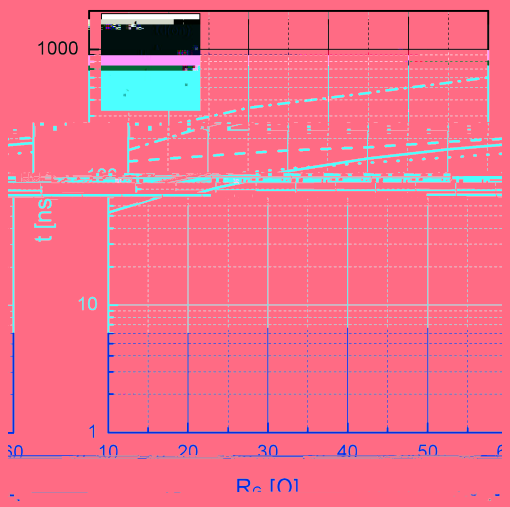


Fig [illegible] Typical switching time as a function of $_{C}$



[illegible]

Typical performance characteristics

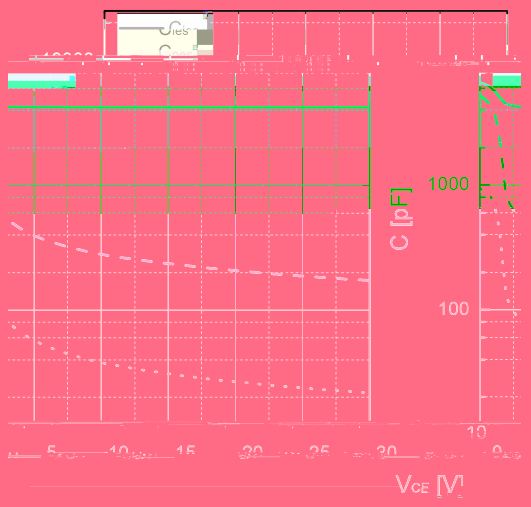
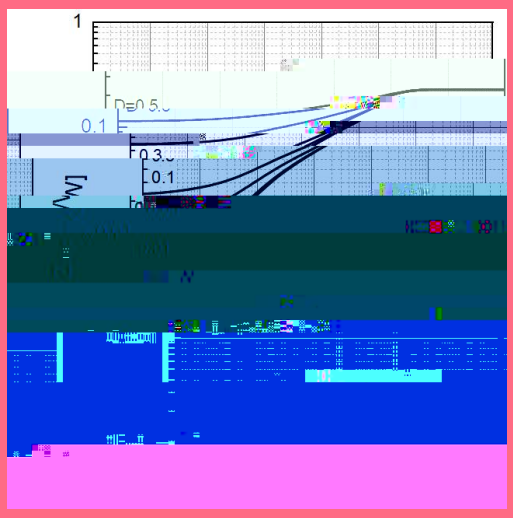
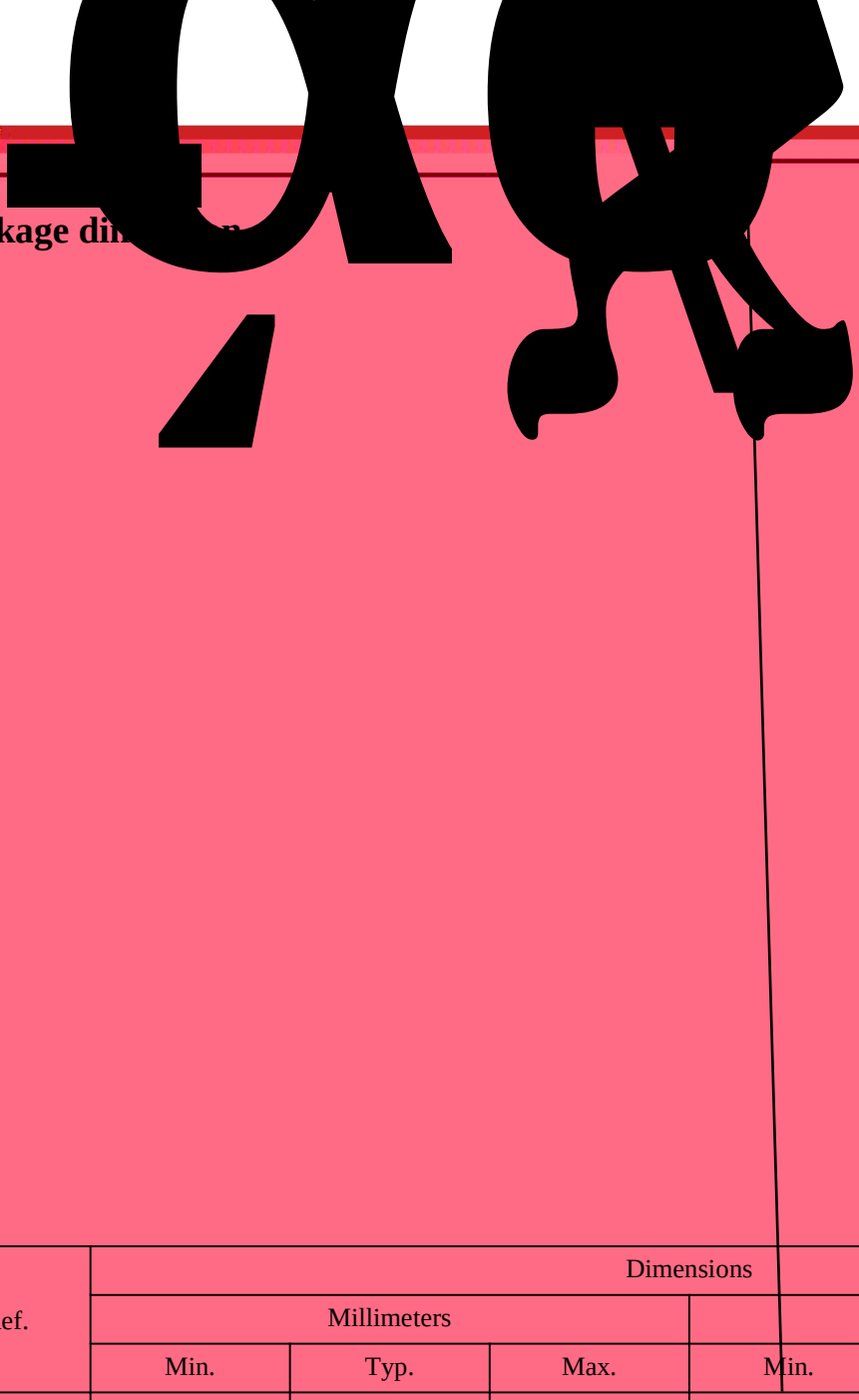


Fig 13. Typical capacitance as a function of $_{CE}$
(f=1Mhz, $_{GE}$=/ V



Package dimension



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

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