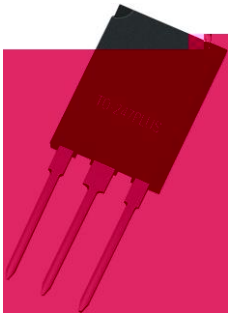
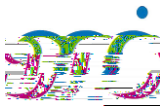
DGQ75N120CTL1A



Maximum Ratings

Parameter	Symbol	Value	Unit



Electrical Characteristics of the Diode T_j= 25 unless otherwise specified

Parameter	Symbol

Electrical Characteristics of the DIODE

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dynamic , at T_j= 25						
Reverse Recovery Current	I_{rr}	I_F=75A, V_R=600V, di/dt= -500	-	9	-	A
Diode reverse recovery time	trr		-	268	-	ns
Reverse Recovery Charge	Q_{rr}		-	3.42	-	uC
Reverse Recovery Energy	Erec		-	1.52	-	mJ
Dynamic , at Tj= 125						
Reverse Recovery Current	I_{rr}	I_F=75A, V_R=600V, di/dt= -500	-	12	-	A
Diode reverse recovery time	trr		-	337	-	ns
Reverse Recovery Charge	Q_{rr}		-	6.58	-	uC
Reverse Recovery Energy	Erec		-	3.18	-	mJ
Dynamic , at Tj= 150						
Reverse Recovery Current	I_{rr}	I_F=75A, V_R=600V, di/dt= -500	-	14	-	A
Diode reverse recovery time	trr		-	375	-	ns
Reverse Recovery Charge	Q_{rr}		-	9.45	-	uC
Reverse Recovery Energy	Erec		-	3.73	-	mJ

Thermal Resistance

Parameter	Symbol	Max. Value	Unit

IGBT Thermal Resistance, Junction - Case

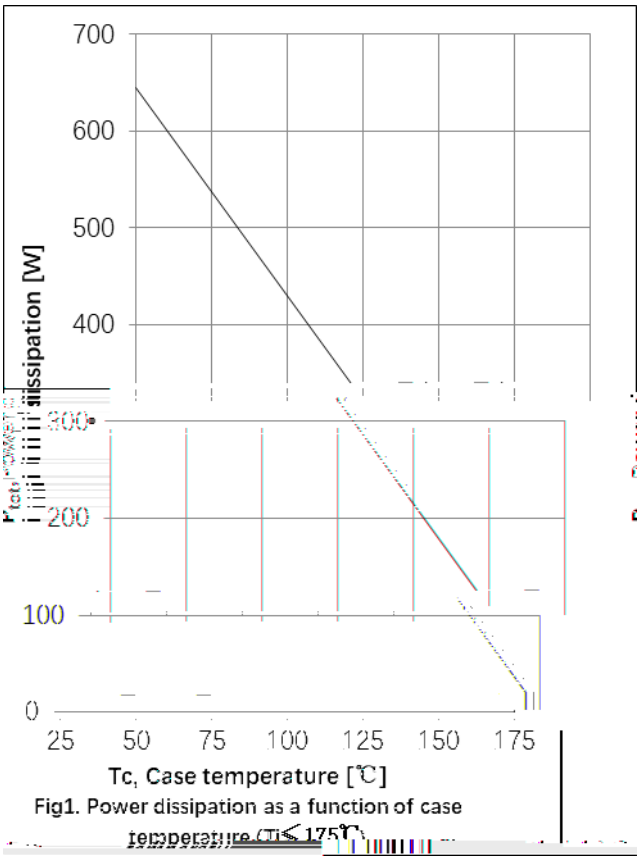


Fig1. Power dissipation as a function of case temperature (Tj≤175℃)

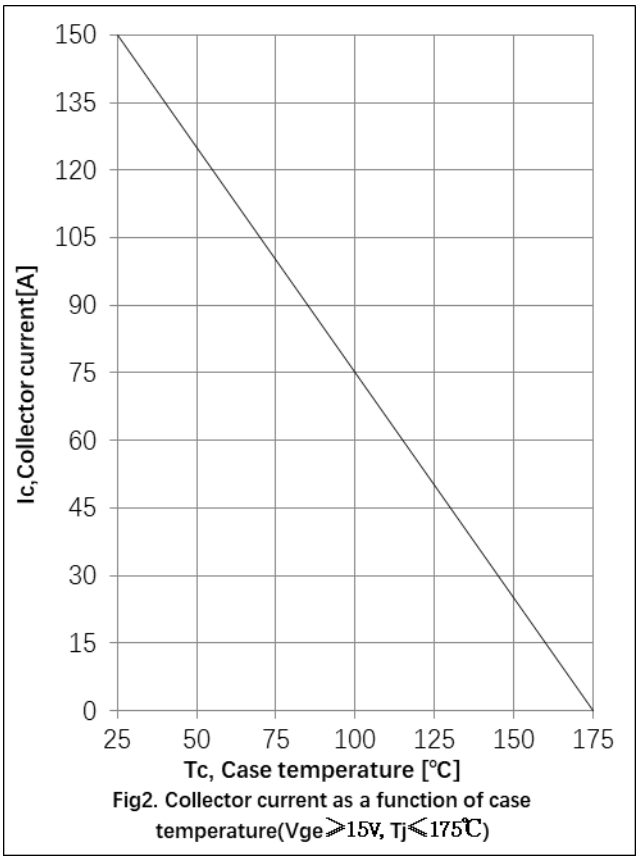
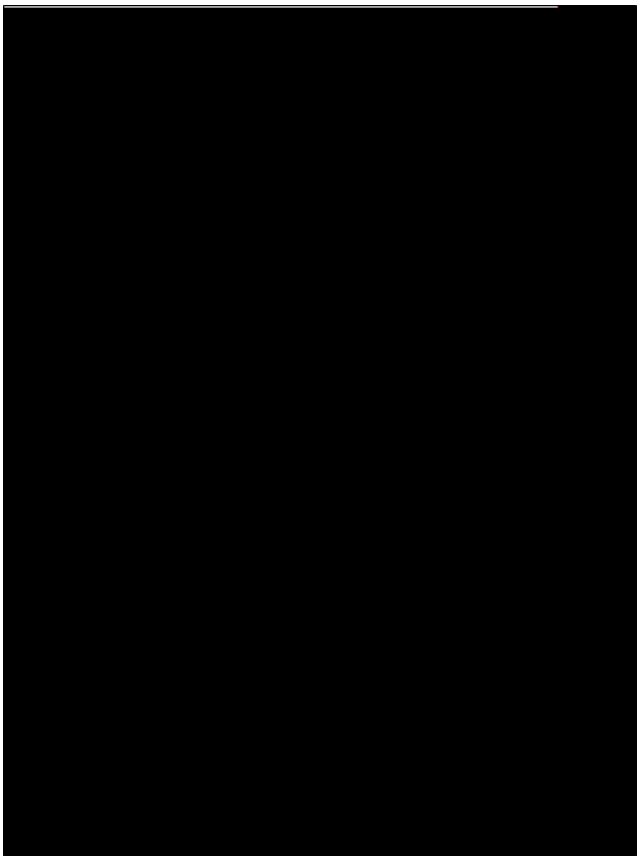
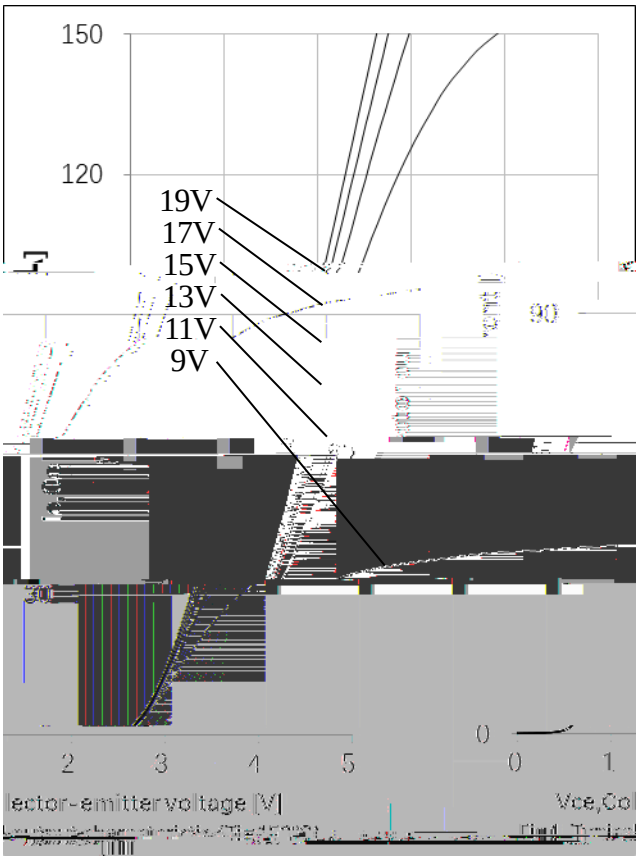
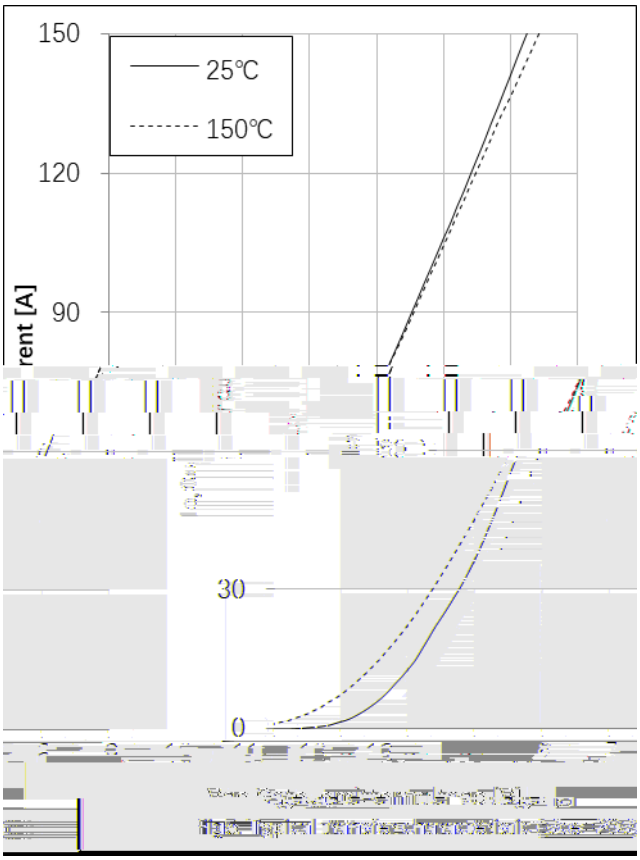
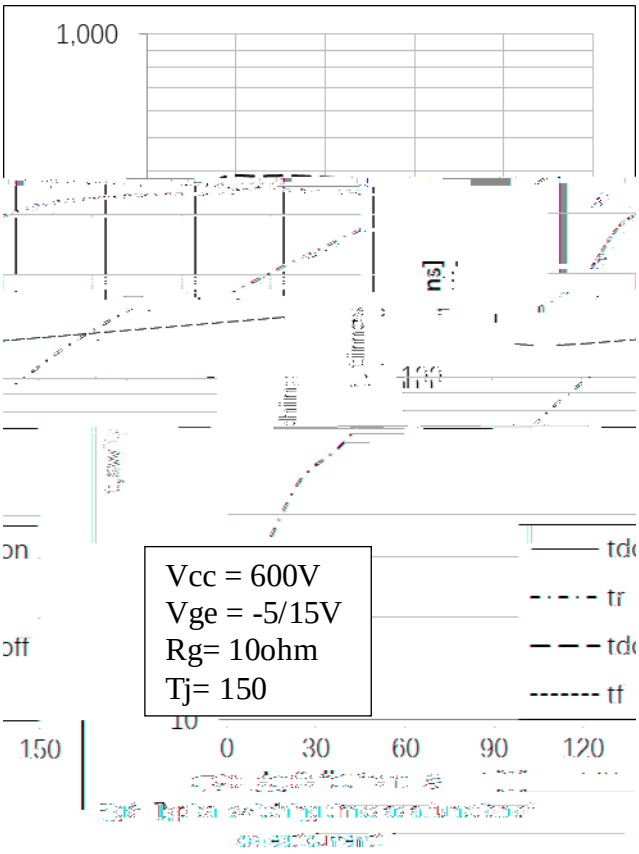


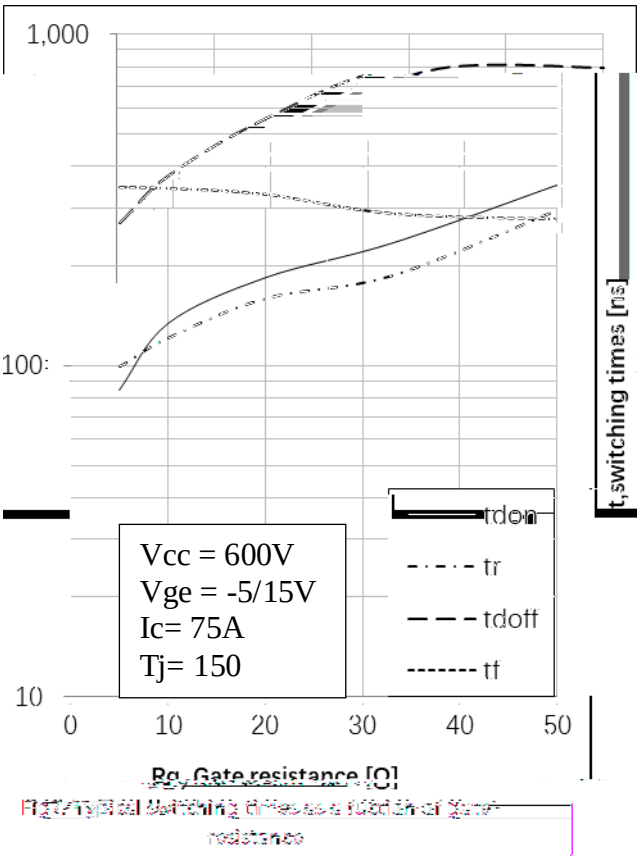
Fig2. Collector current as a function of case temperature(Vge≥15V, Tj≤175℃)

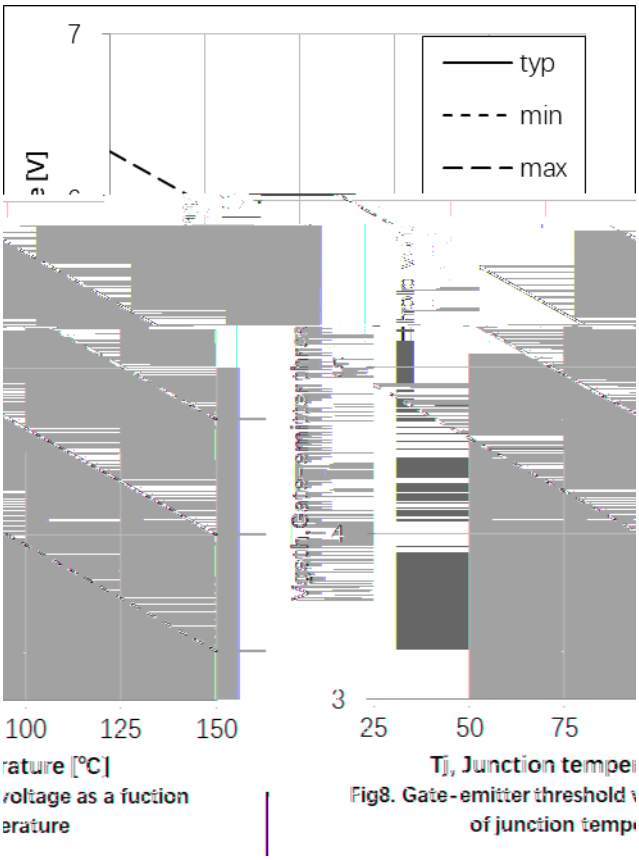


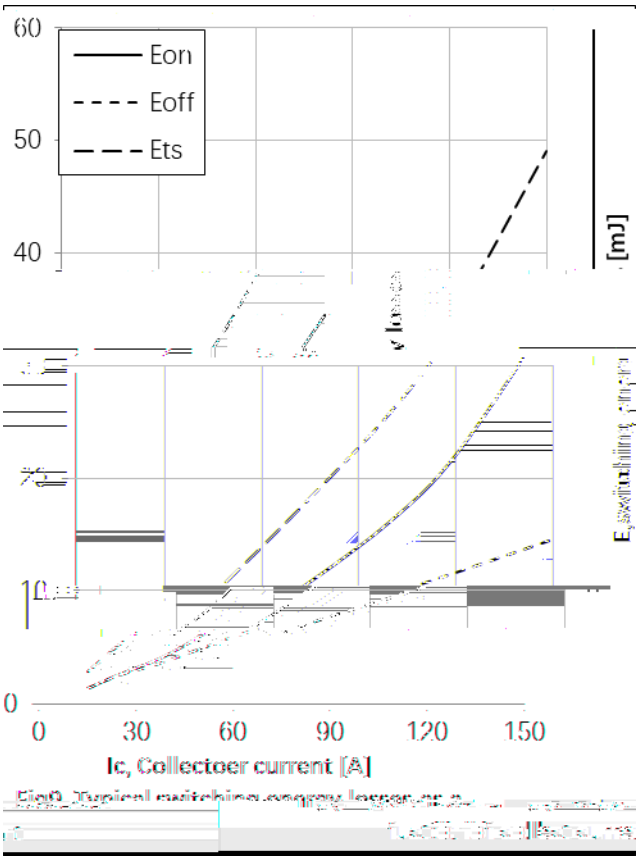



150
120
90
30
0
25℃
150℃


1,000
100
10
0
30
60
90
120
150
Vcc = 600V
Vge = -5/15V
Rg= 10ohm
Tj= 150
tdon
tr
tdoff
tf


1,000
100
10
0
10
20
30
40
50
Vcc = 600V
Vge = -5/15V
Ic= 75A
Tj= 150
tdon
tr
tdoff
tf
t,switching times [ns]
Rg, Gate resistance [Ω]


7
4
3
typ
min
max
100
125
150
25
50
75
Tj, Junction temper


60
50
40
Eon
Eoff
Ets
[mJ]
0
0
30
60
90
120
150
Ic, Collectoer current [A]

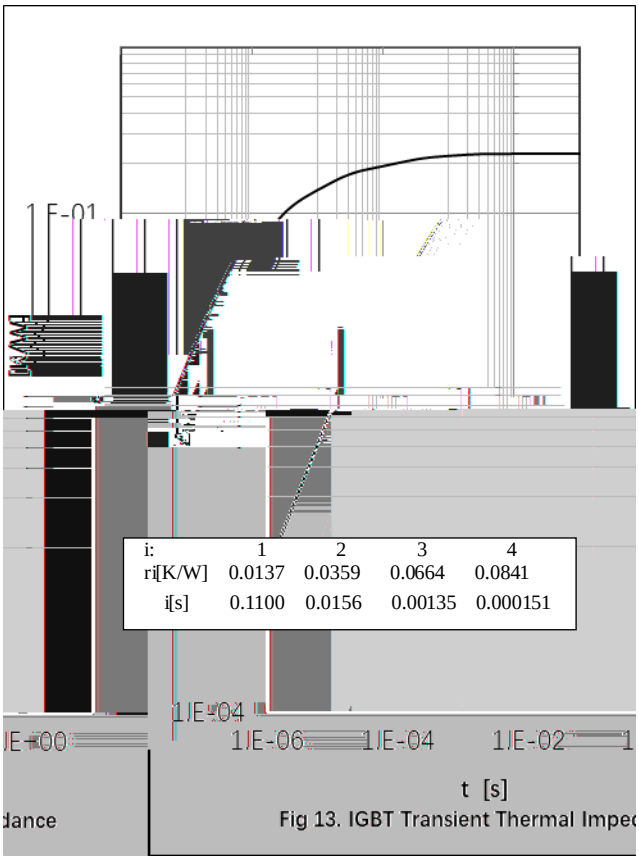


Fig 13. IGBT Transient Thermal Impe

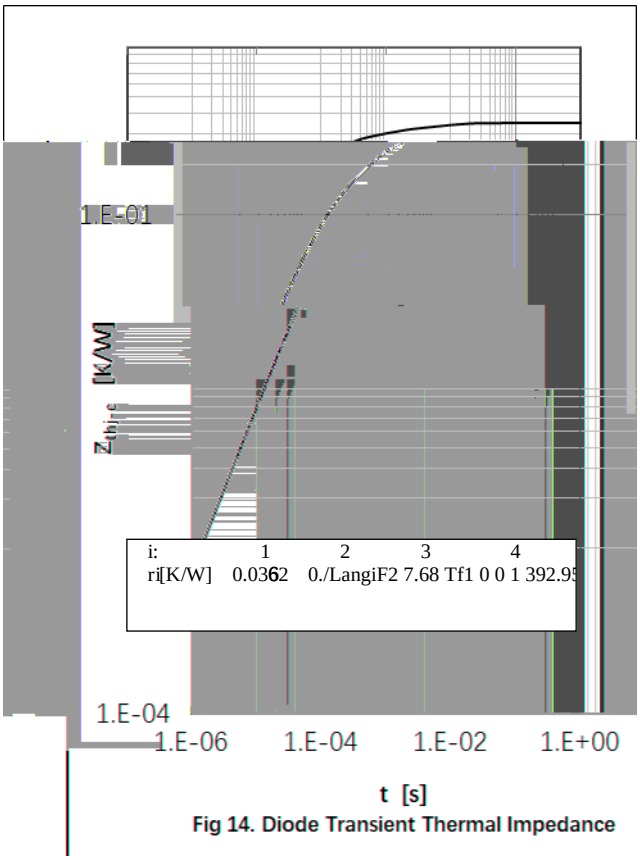
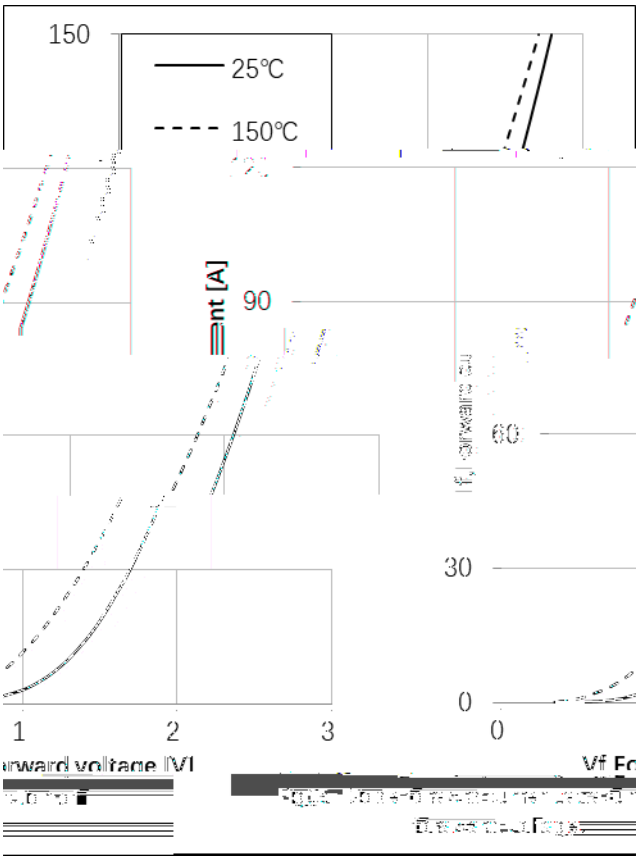
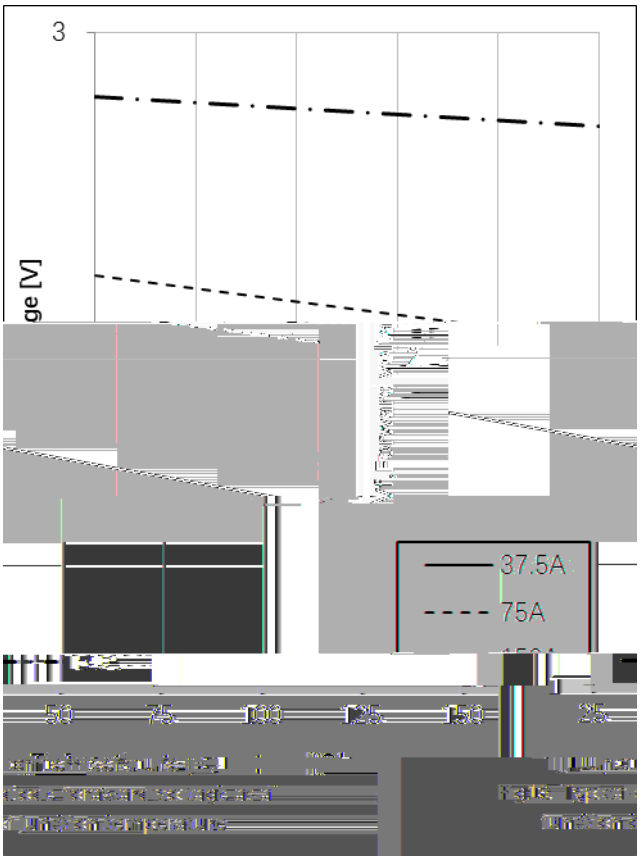
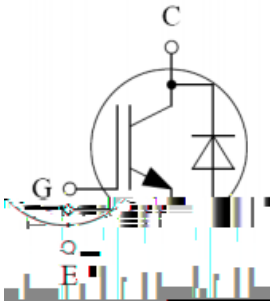


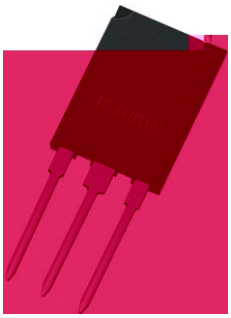
Fig 14. Diode Transient Thermal Impedance





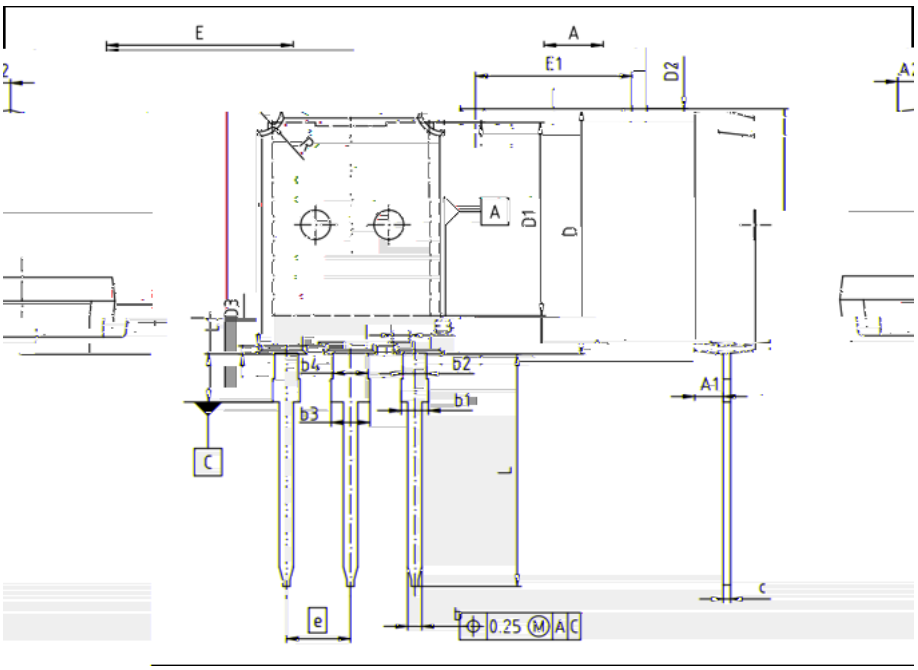
C M





Package Outline Information

CASE: TO 247plus



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