

Maximum Ratings



Electrical Characteristics of the IGBT $T_j = 25$ unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.
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**Electrical Characteristics of the Diode** $T_j = 25$ unless otherwise specified

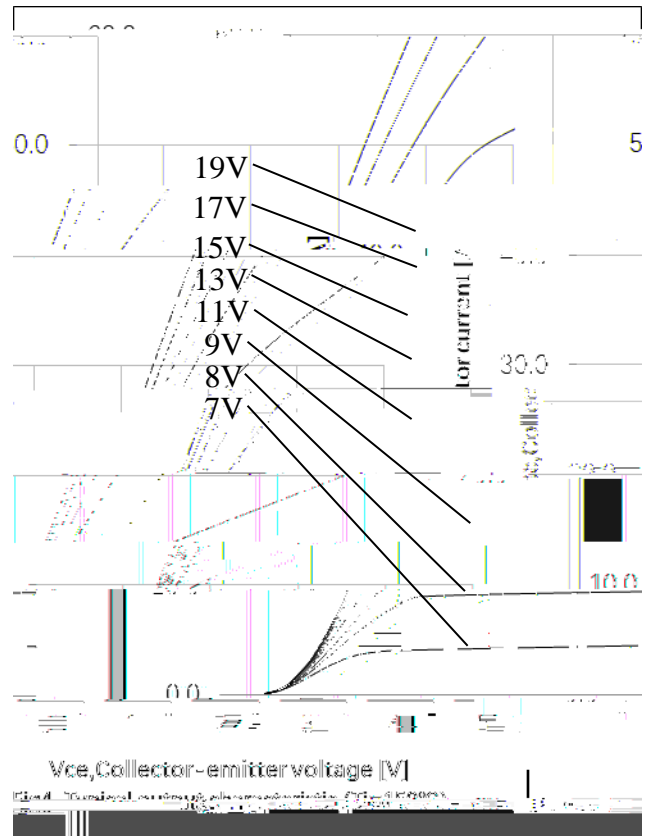
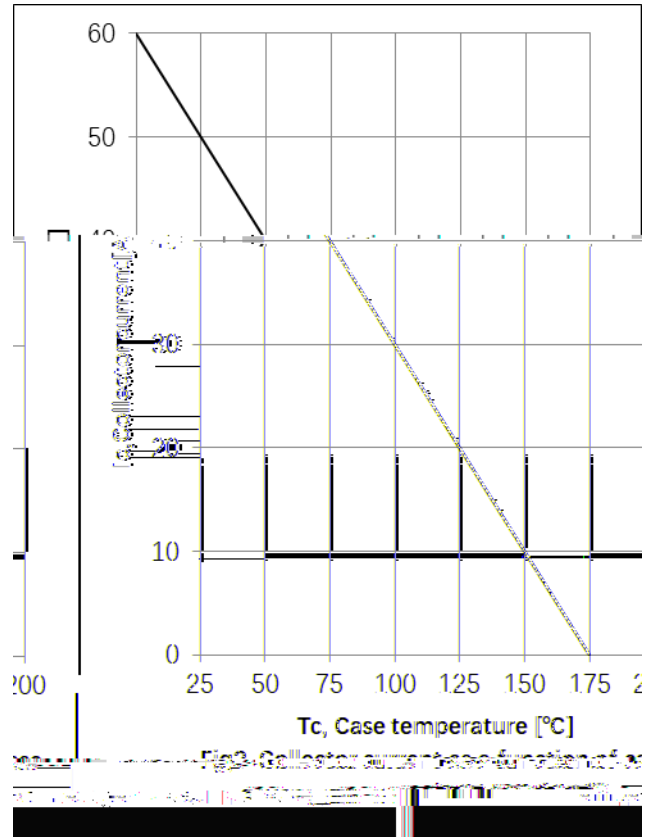
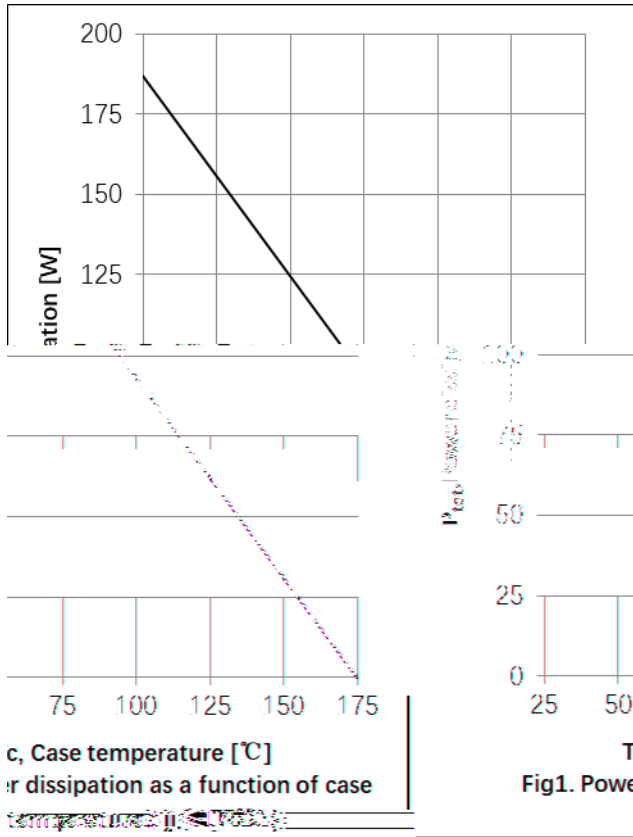
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static						
Diode Forward Voltage	V_F	$I_F = 30A$ $T_j = 25^\circ C$, $T_j = 125^\circ C$ $T_j = 150^\circ C$		1.90 1.85 1.75	2.60	V

Switching Characteristic, Inductive Load

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dynamic , at $T_j = 25$						
Turn-on Delay Time	$t_{d(on)}$	$V_{CC} = 400V, I_C = 30A,$ $V_{GE} = 0V \sim 15V,$ $R_g = 10, L_s = 60nH$	-	8	-	ns
Rise Time	t_r		-	22	-	ns
Turn-on Energy	E_{on}		-	1.05	-	mJ
Turn-off Delay Time	$t_{d(off)}$		-	80	-	ns
Fall Time	t_f		-		20.52	



DGW30N65CTH



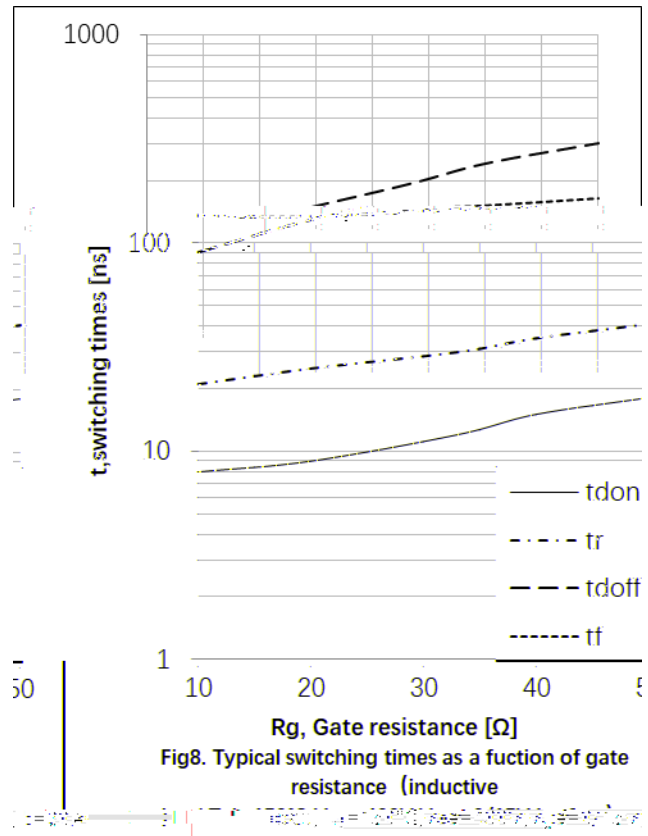
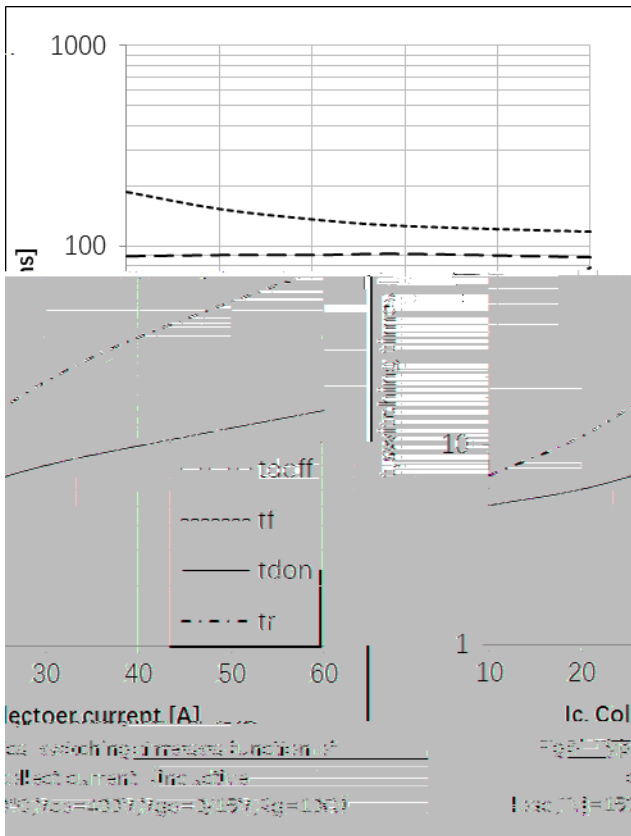
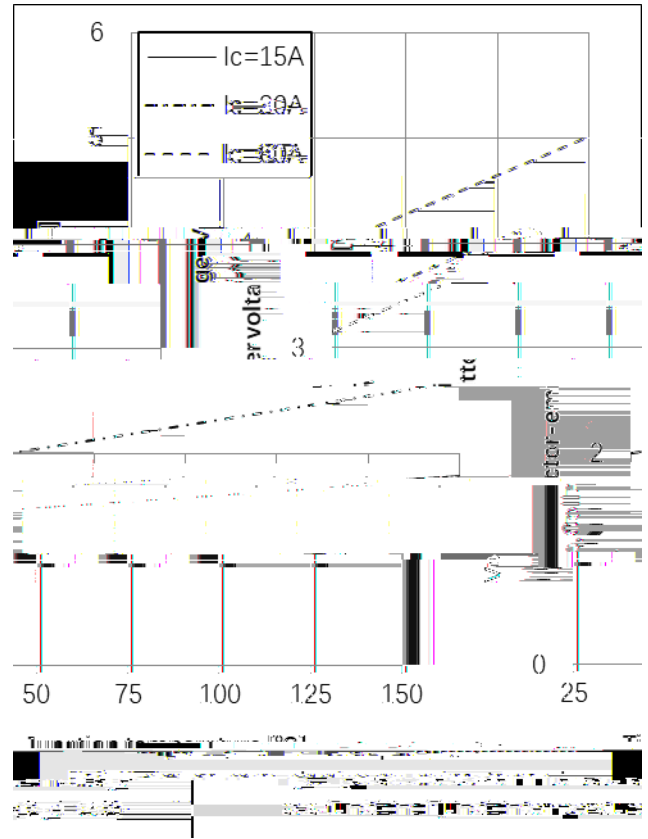
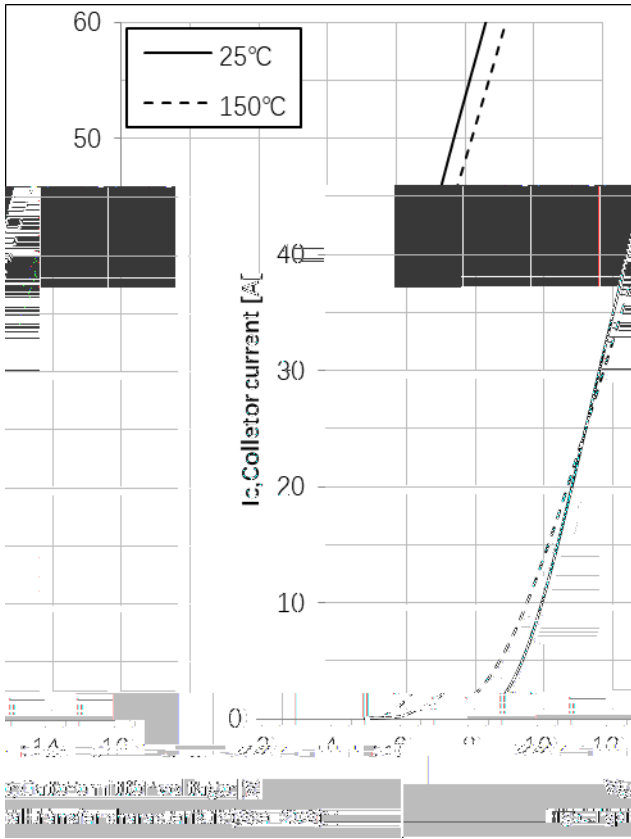


Fig8. Typical switching times as a fuction of gate resistance (inductive)

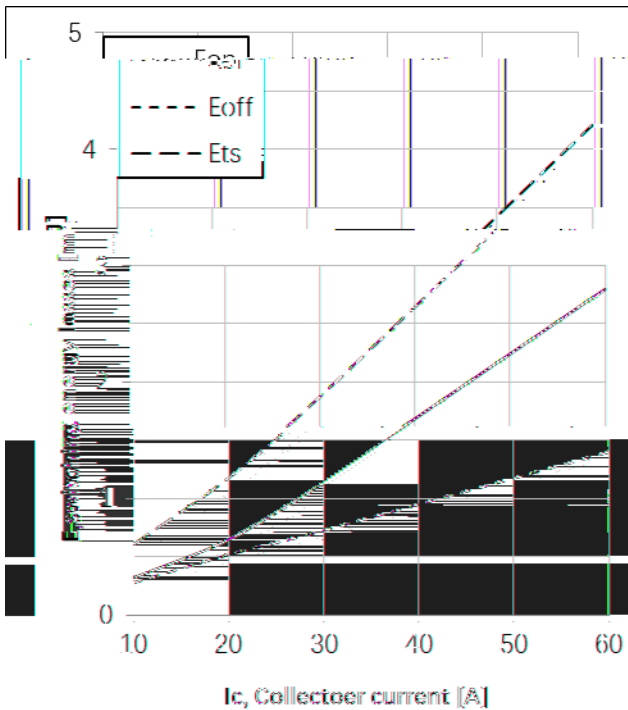
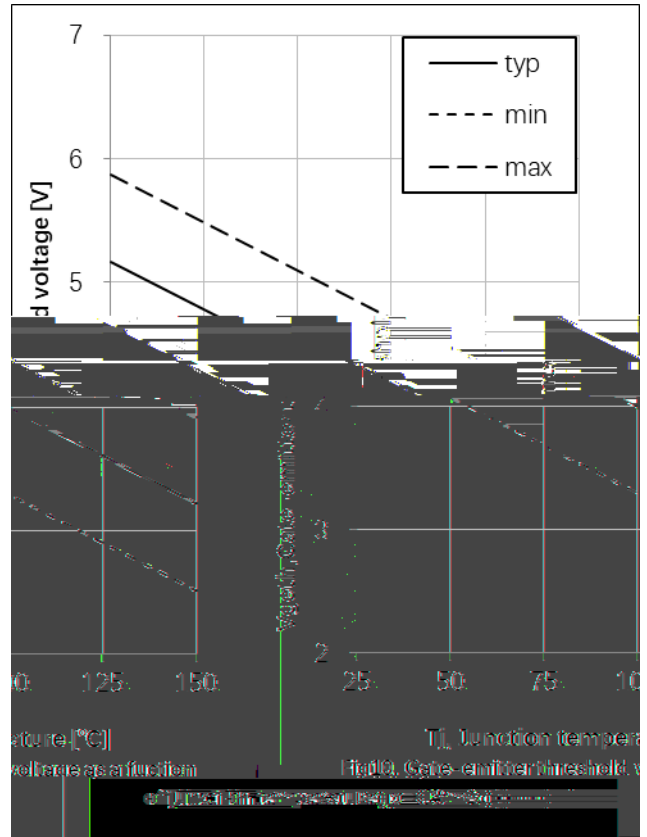
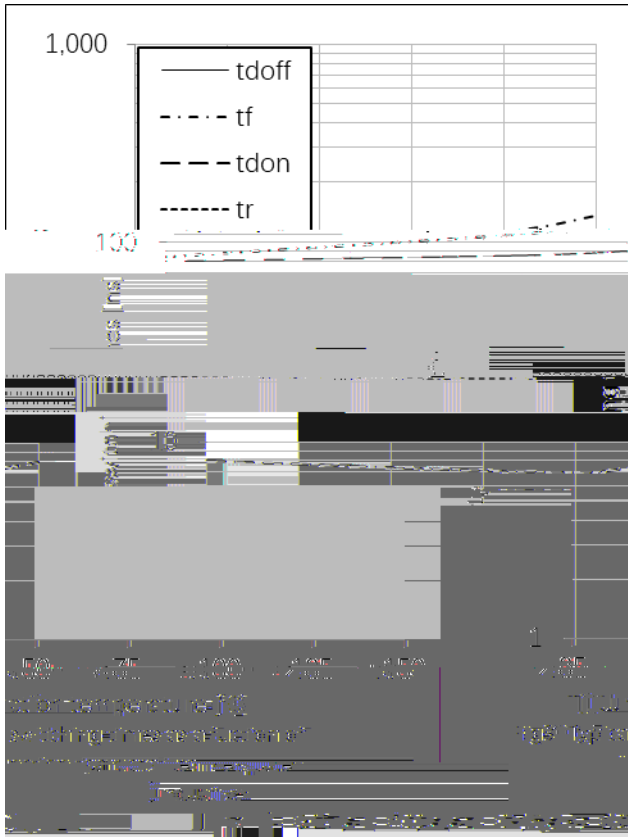


Fig11. Typical switching energy losses as a function of collector current

$I_{base} = 1.87A, V_{ce} = 400V, V_{gs} = 19.0V, Q_g = 1.0nC$

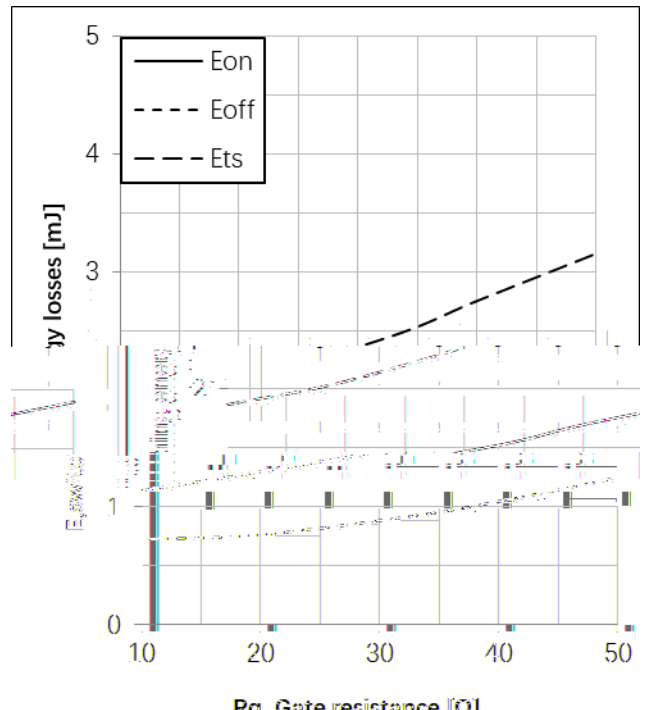
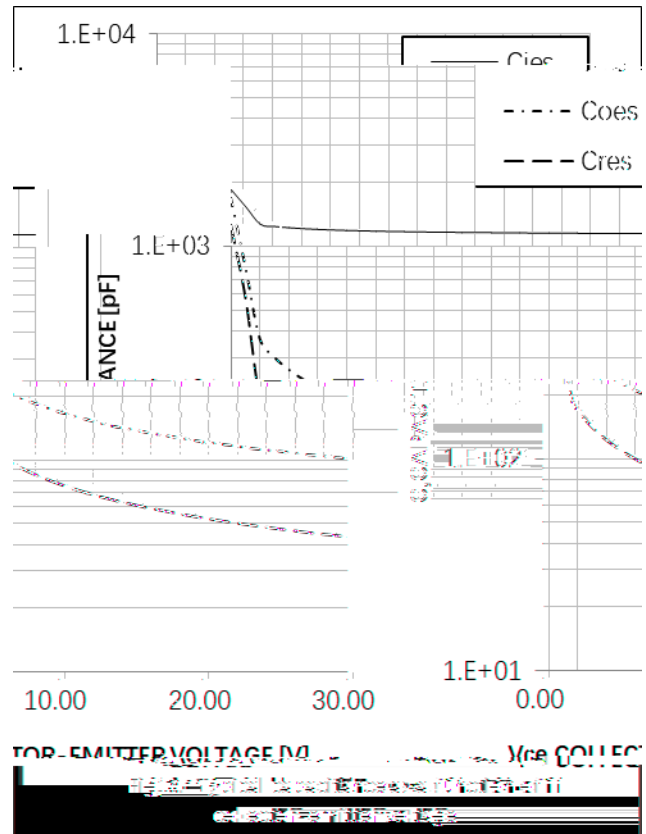
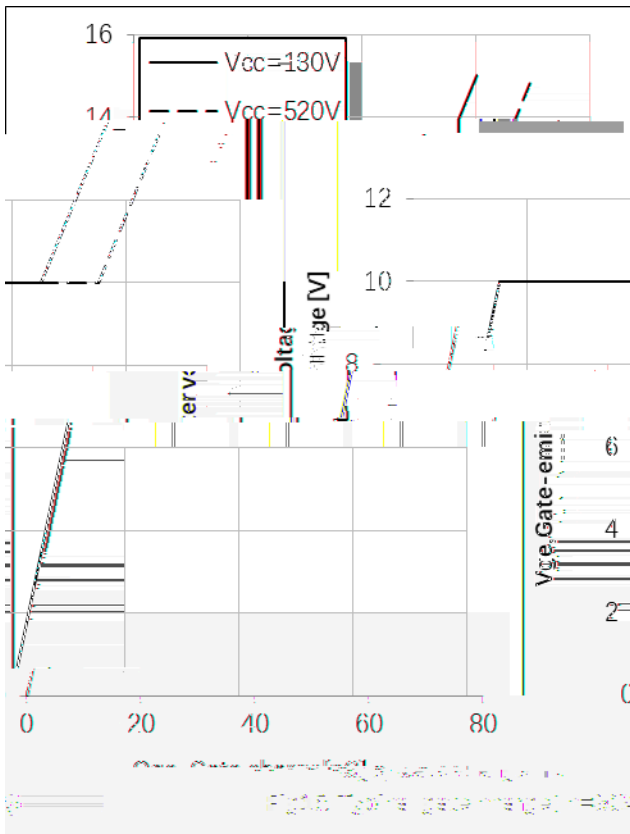
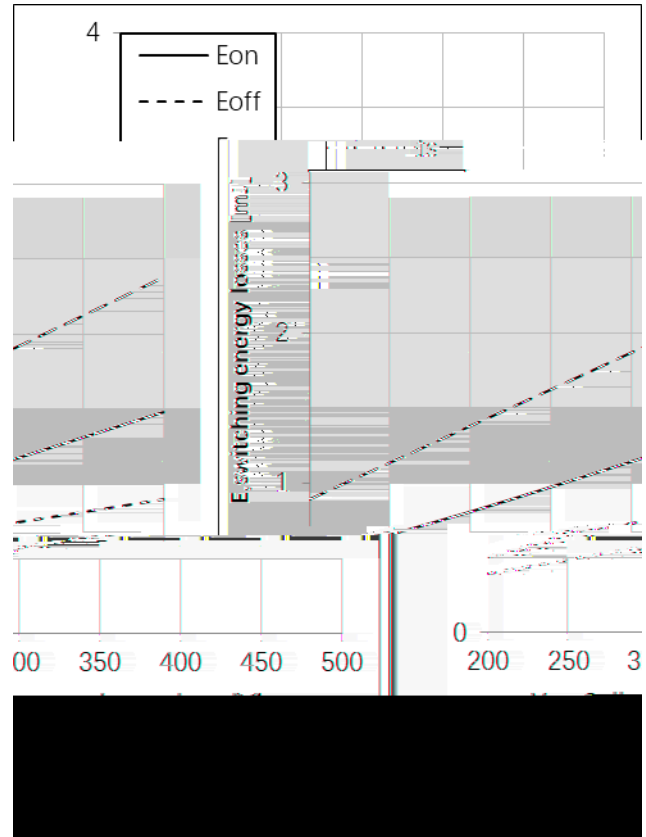


Fig12. Typical switching energy losses as a function of gate resistance. (inductive load)

$V_{ce} = 400V, I_{load} = 20A, V_{gs} = 19.0V, Q_g = 1.0nC$



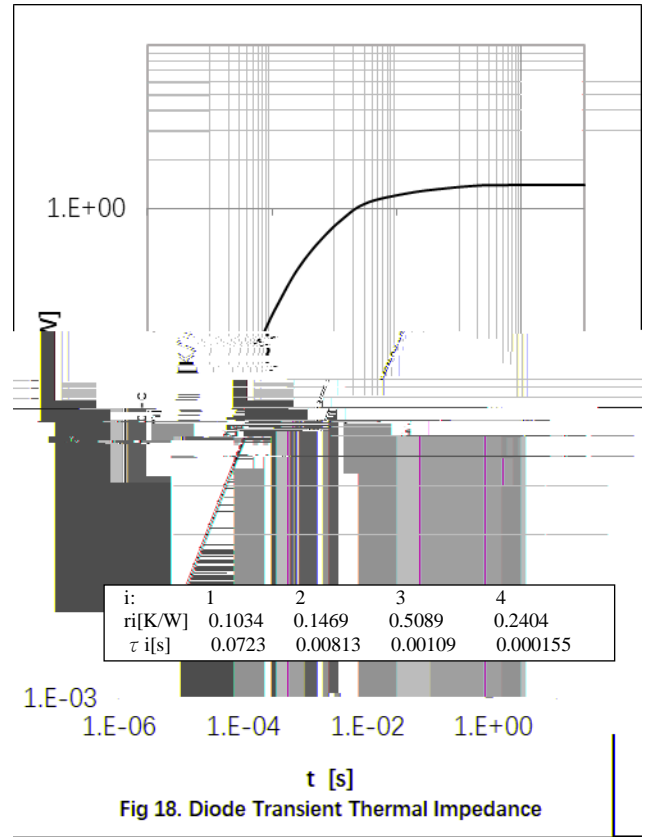
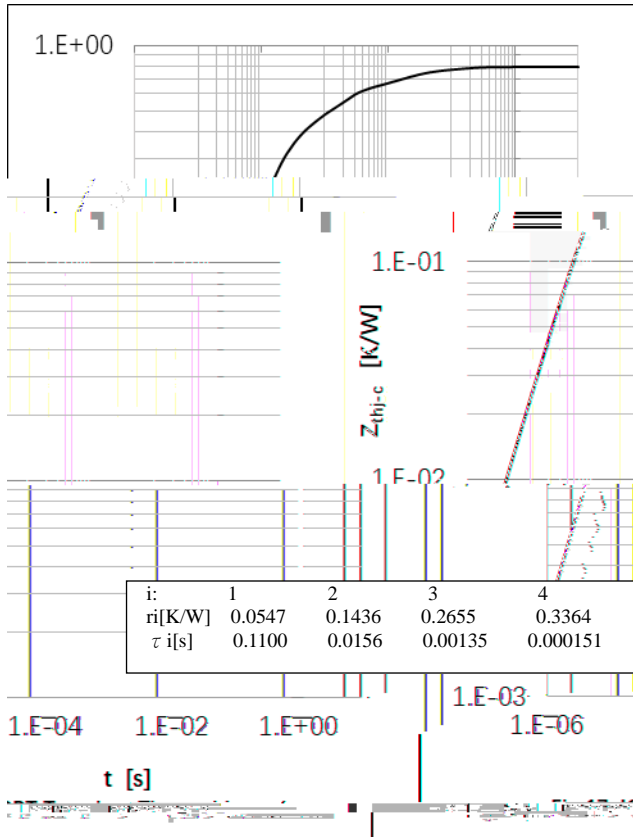


Fig 18. Diode Transient Thermal Impedance

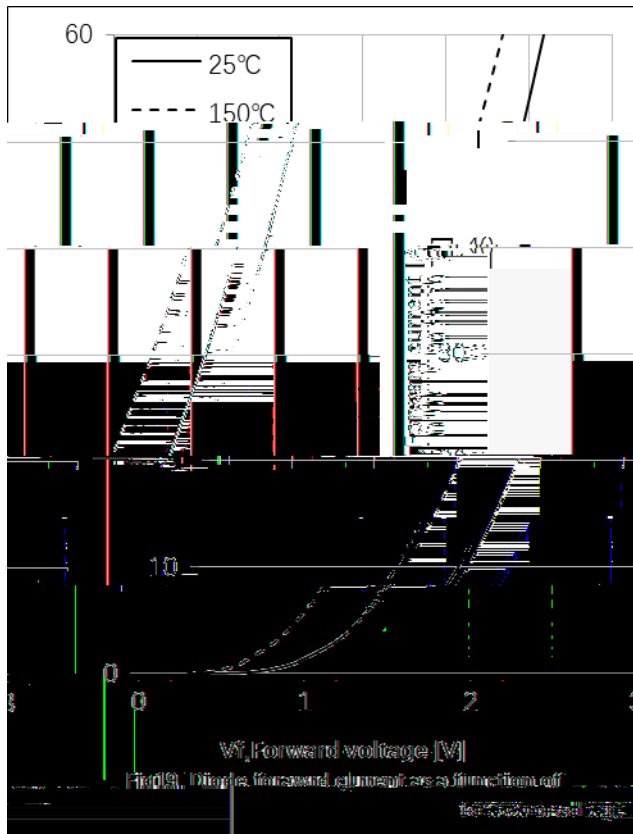
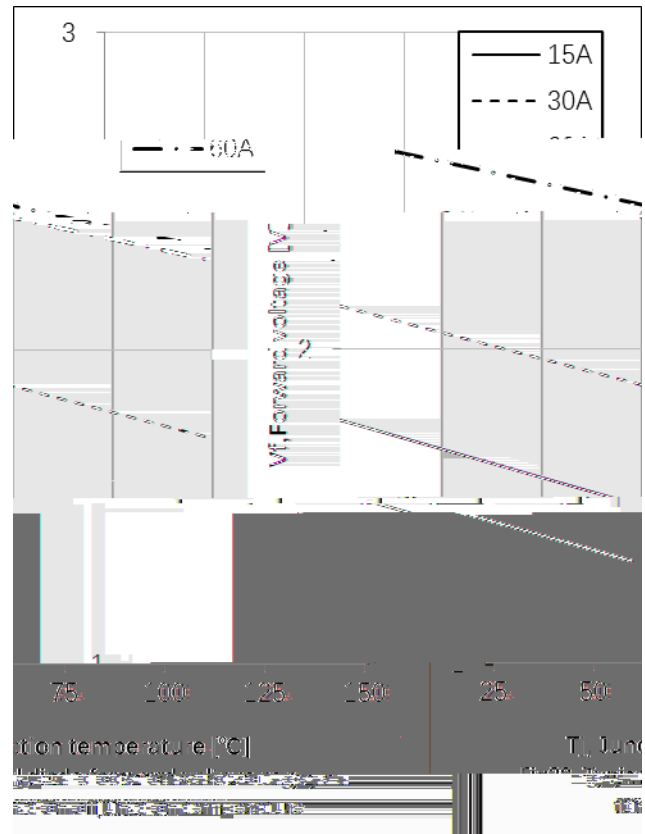
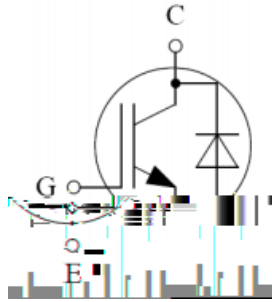
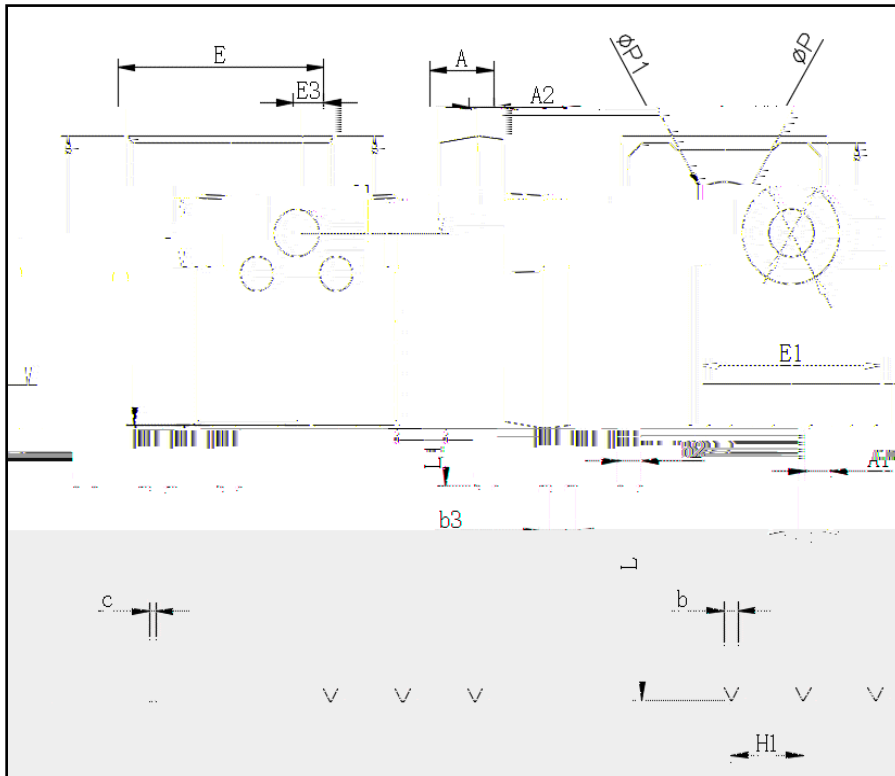


Fig 19. Diode forward voltage as a function of





Package Outline Information



TO-247AB		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.0	1.4
b2	1.91	2.21
C	0.5	0.7
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.0	13.6
E2	4.80	5.20
E3	2.30	2.70
L	19.62	20.22
L1	-	4.30
ΦP	3.40	3.80
ΦP1	-	7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20