

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Emitter Breakdown Voltage	V_{CE}	650	V
DC Collector Current, limited by T_{jmax} $T_C= 25^{\circ}C$ $T_C= 100^{\circ}C$	I_C	40 30	A
Diode Forward Current, limited by T_{jmax} $T_C= 25^{\circ}C$ $T_C= 100^{\circ}C$	I_F		



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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static						
Collector-Emitter Breakdown Voltage	BV_{CES}	$V_{GE}=0V, I_C$	650		-	V
Gate Threshold Voltage	$V_{GE(th)}$	$V_{GE}=V_{CE}, I_C=1mA$	4.7	5.5	6.2	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{GE}=15V, I_C=30A$ $T_j=25^\circ C$ $T_j=125^\circ C$ $T_j=150^\circ C$		1.65 2.00 2.10	1.95	V
Zero Gate Voltage Collector Current	I_{CES}	$V_{CE}=650V, V_{GE}=0V$ $T_j=25^\circ C,$ $T_j=150^\circ C$			0.25 4.00	mA
Gate-Emitter Leakage Current	I_{GES}	$V_{CE}=0V, V_{GE}=\pm 20V$			100	nA

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dynamic						
Input Capacitance	C_{ies}	$V_{CE}=25V, V_{GE}=0V,$ $f=1MHz$	-	1.53	-	nF
Reverse Transfer Capacitance	C_{res}		-	0.04	-	



DGB30N65CTL1E

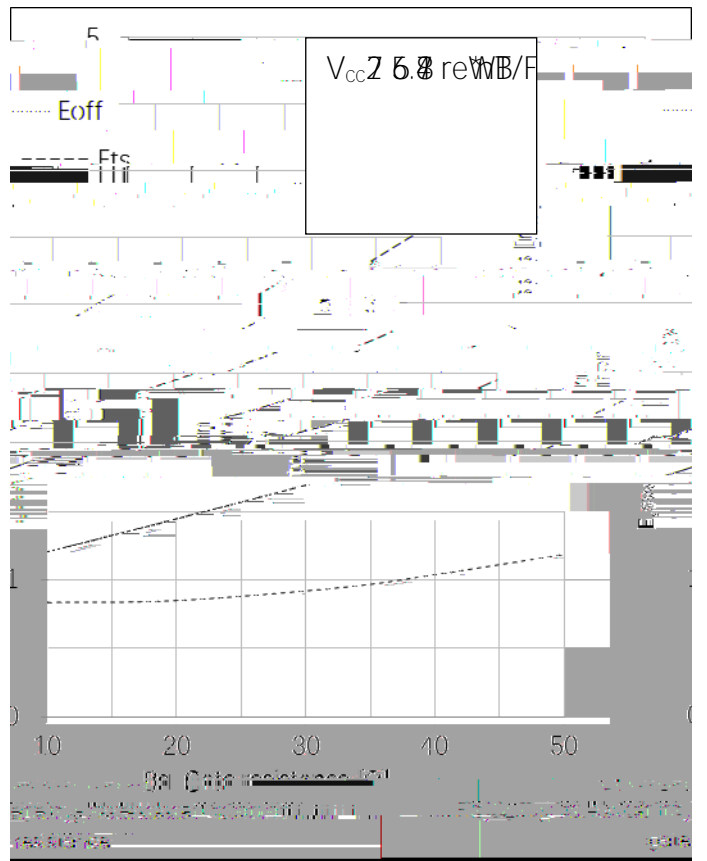
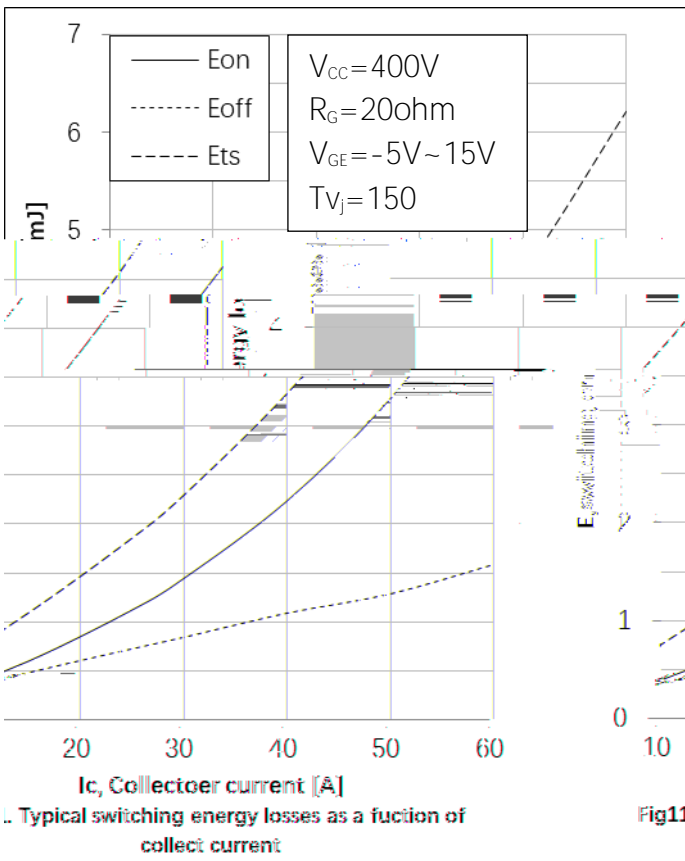
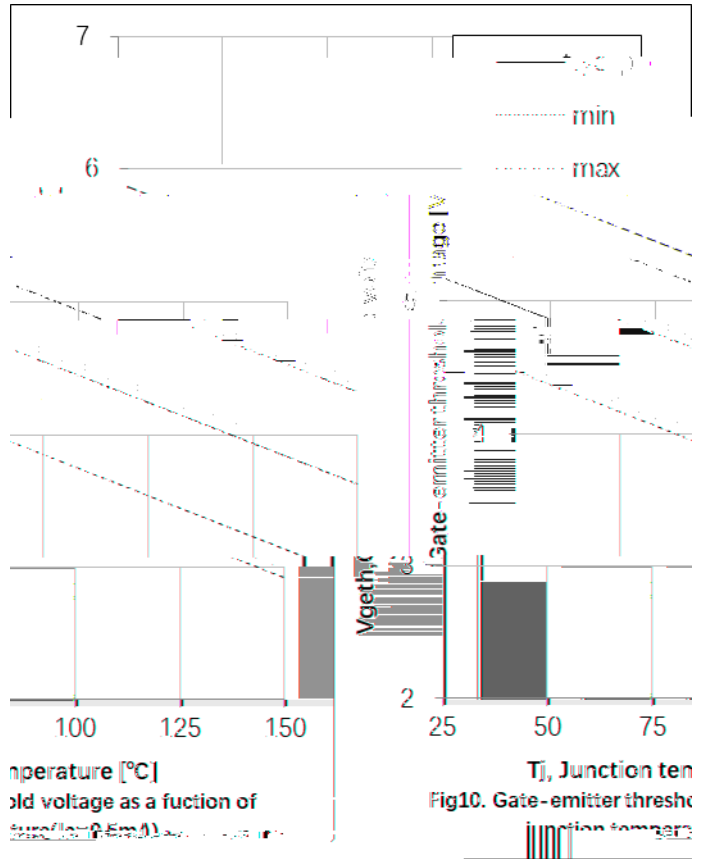
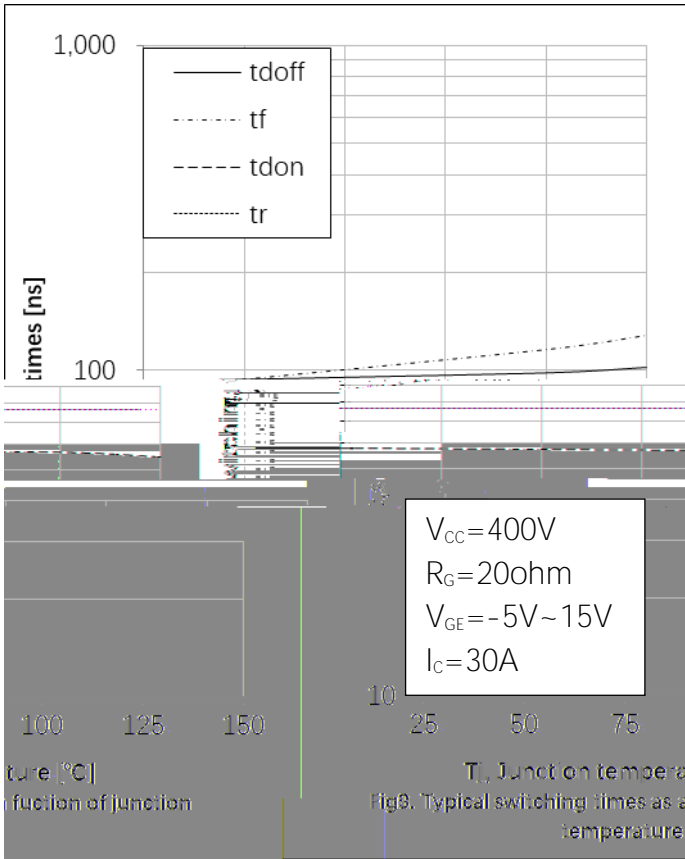


Electrical Characteristics of the DIODE

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dynamic , at $T_j=25$						
Reverse Recovery Current	I_{rr}		-	11	-	A
Reverse Recovery Charge	Q_{rr}		-	0		
$I_F=30A, V_R=400V$ $di/dt= -32$						

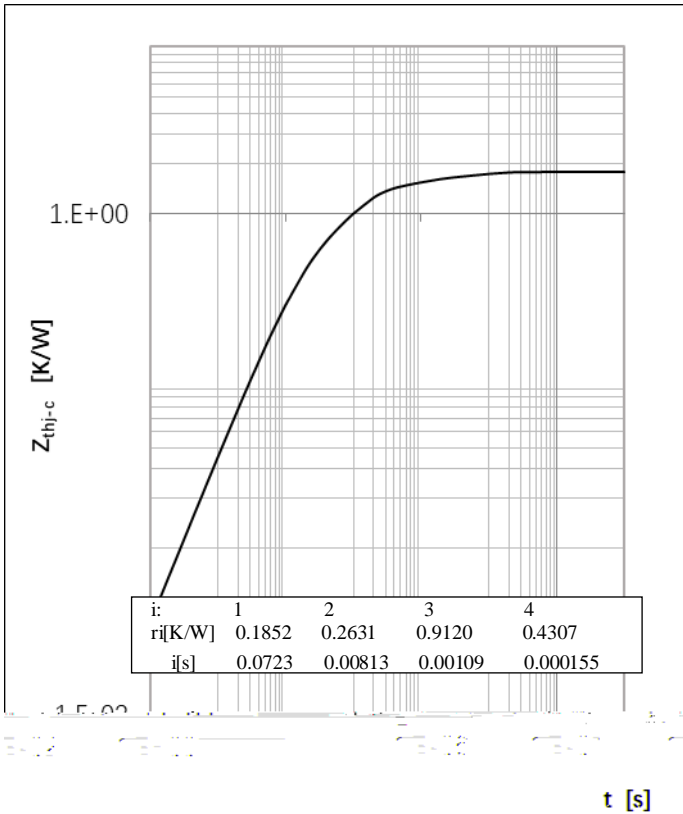








DGB30N65CTL1E



mal Impedance

Fig17. Diode Transient Ther

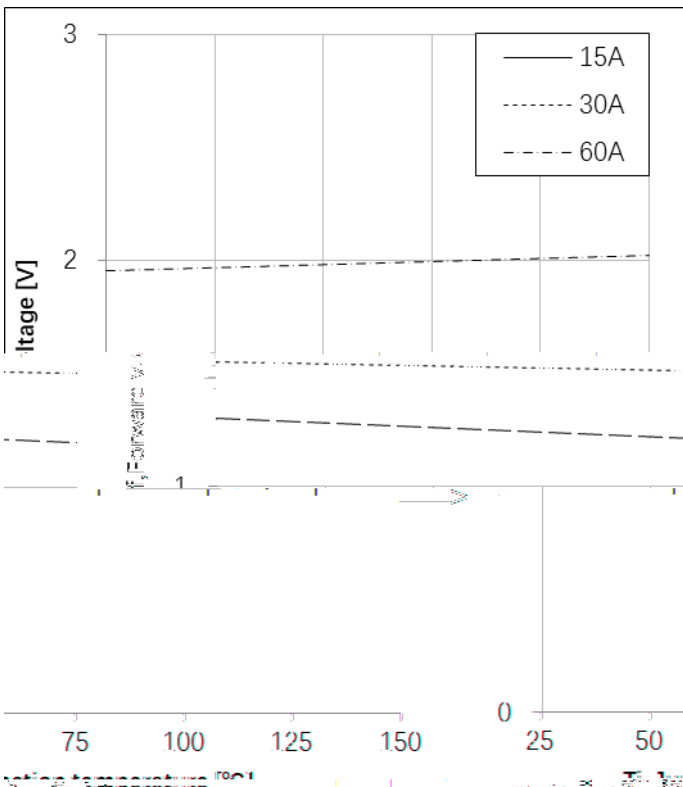
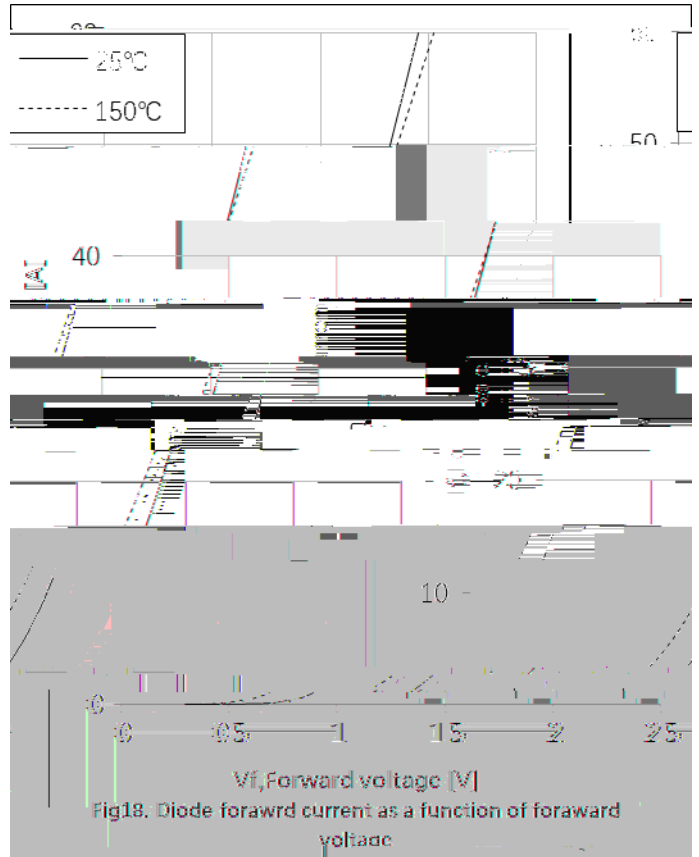
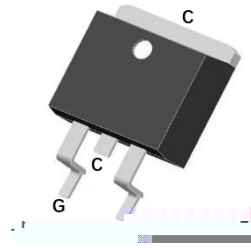
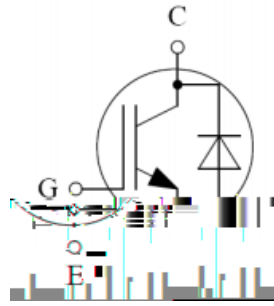


Fig18. Diode forward current as a function of forward voltage

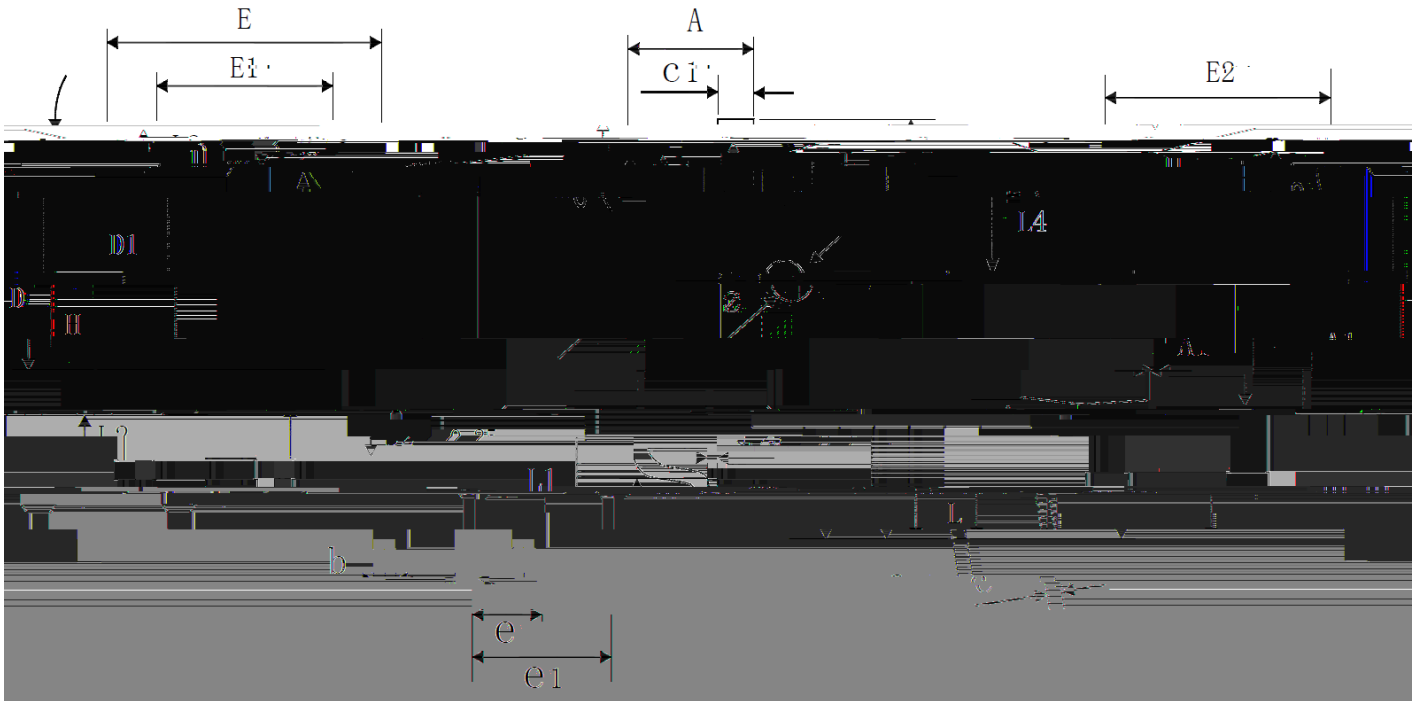


C M



Package Outline Information

CASE: TO 263



TO-263(mm)								
Dim	Min	Max	Dim	Min	Max	Dim	Min	Max
A	4.3	4.7	H	14.9	15.5	L2	1.3	1.7
A1	0	0.25	E	9.8	10.2	L3	1.15	1.35
b	0.7	0.9	E1	6.3	6.5	L4	4.5	4.6
c	0.4	0.6	E2	7.9	8.1	∅	1.5 REF	
c1	1.25	1.35	e1	4.93	5.23	e	2.54 BSC	
D	9	9.2	L	1.85	2.45		13° TYP	
D1	8	8.2	L1	4.45	4.85			



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