



Maximum Ratings

Parameter

Symbol



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}	$V_{GE}=0V, I_C$	1200		-	V
Gate Threshold Voltage	$V_{GE(th)}$	$V_{GE}=V_{CE}, I_C=1mA$	5.0	5.8	6.6	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{GE}=15V, I_C=40A$ T_j				



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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static						
Diode Forward Voltage	V_F	$I_F = 40A$ $T_j = 25^{\circ}C$, $T_j = 125^{\circ}C$ $T_j = 150^{\circ}C$		2.85 2.60 2.50	3.30	V

Switching Characteristic, Inductive Load

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
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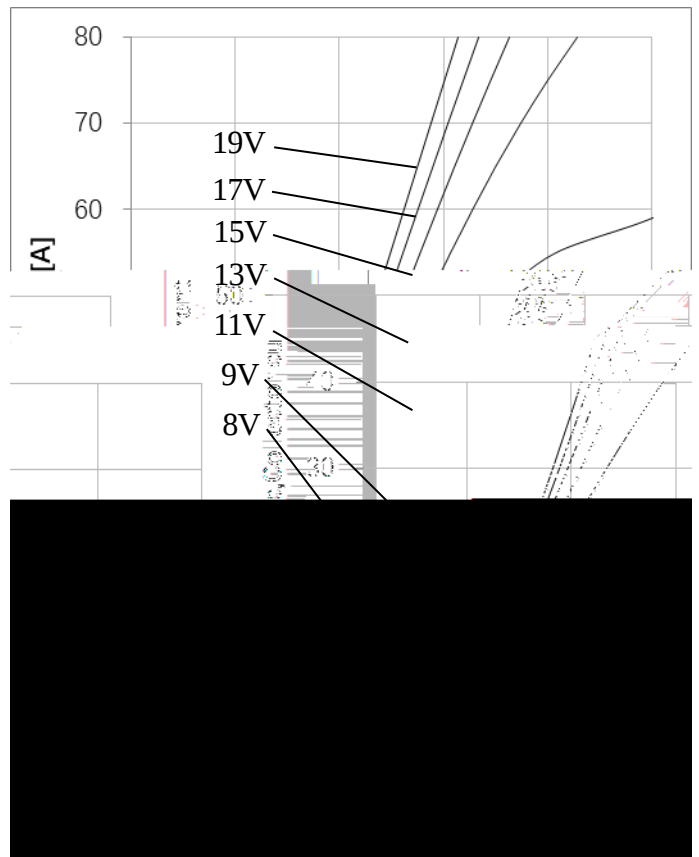
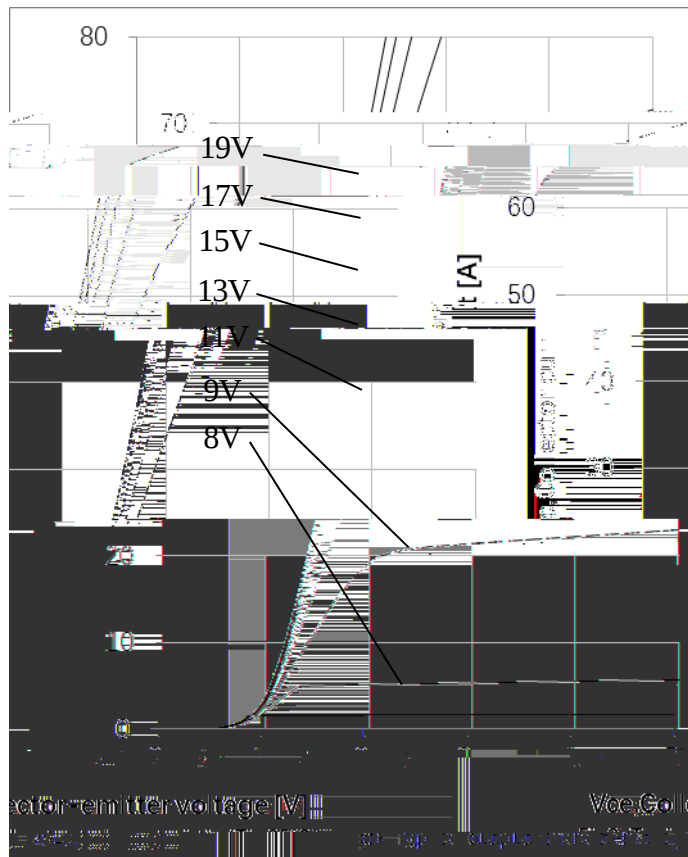
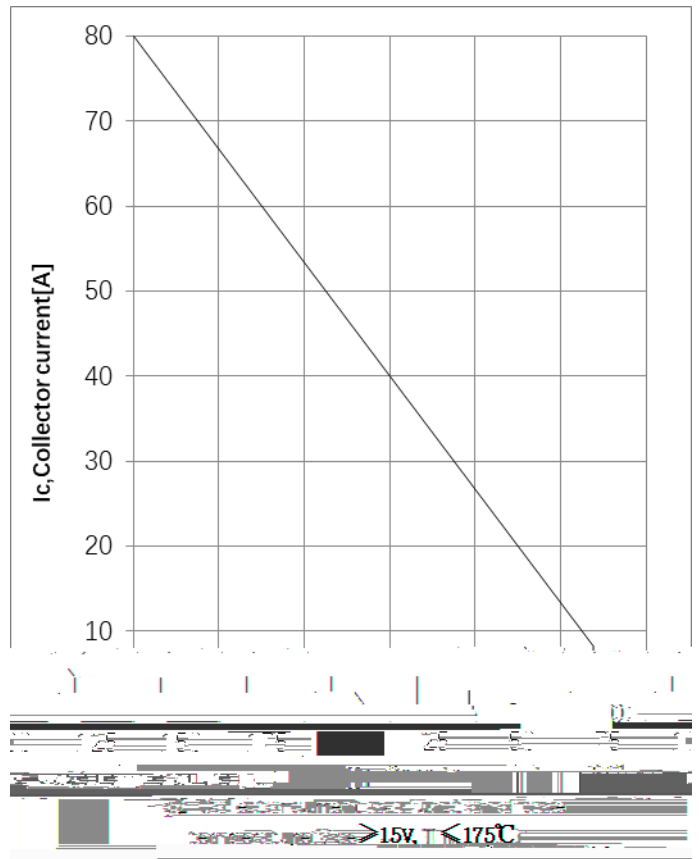
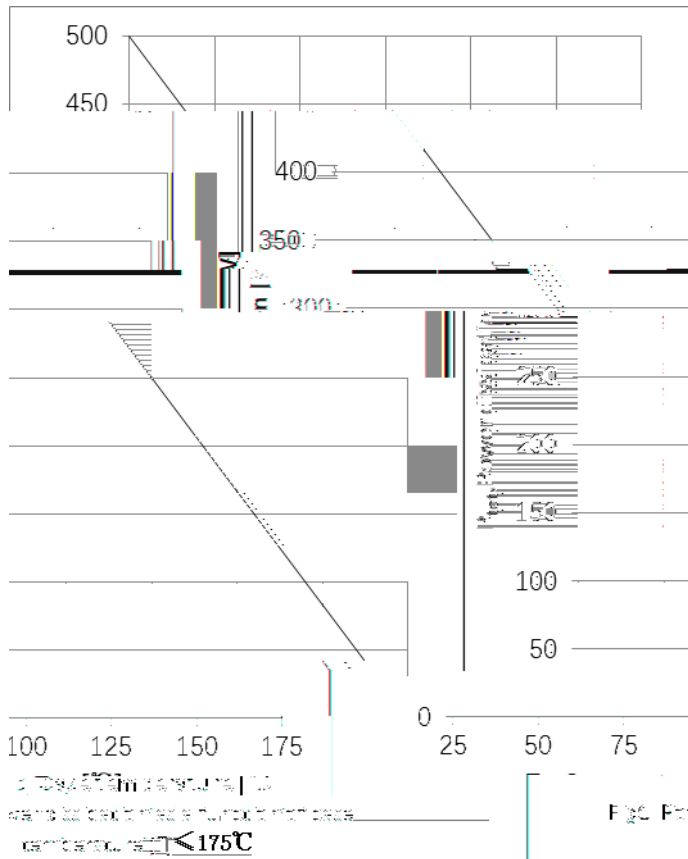
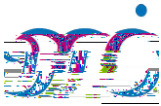
Dynamic , at $T_j = 25$

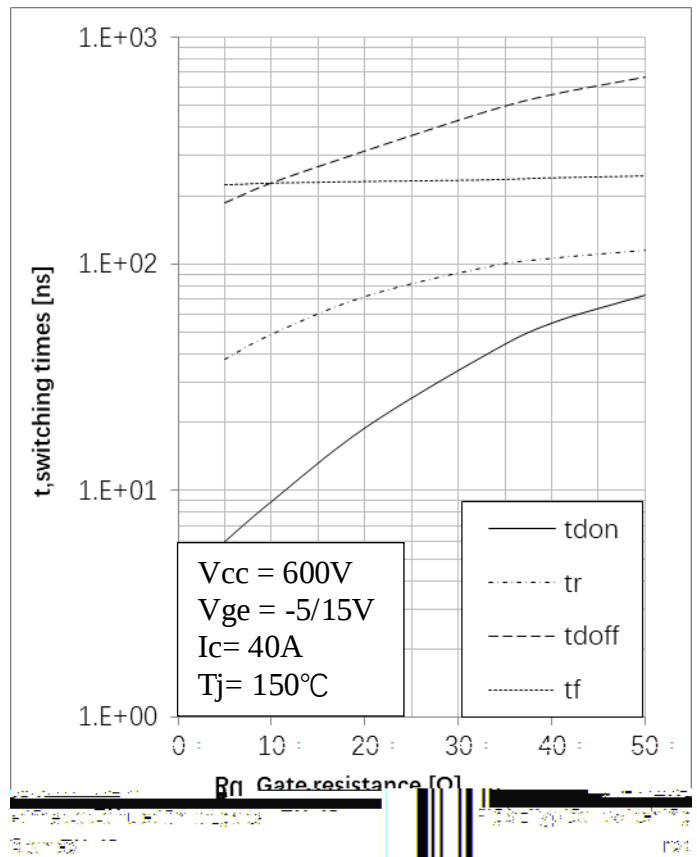
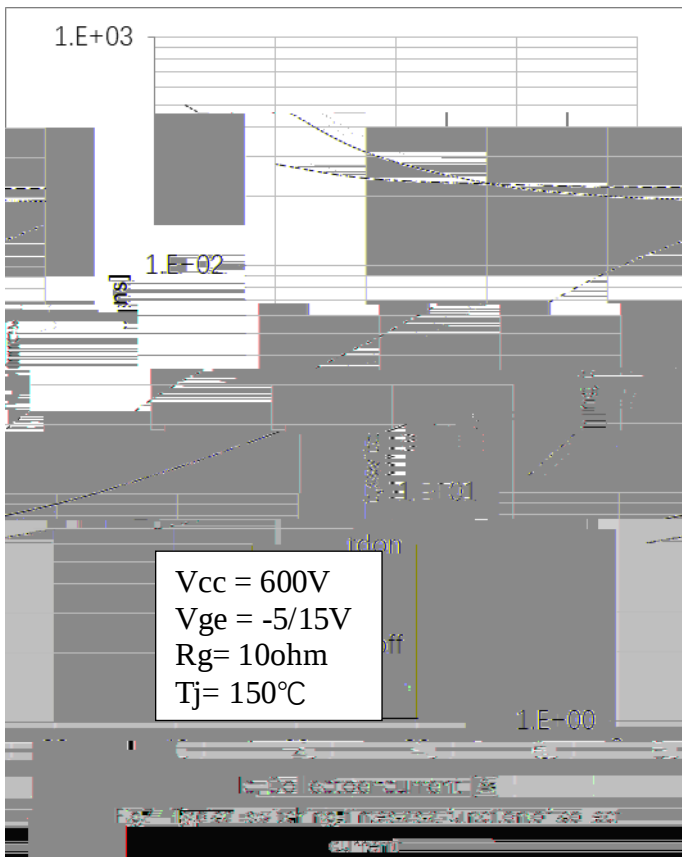
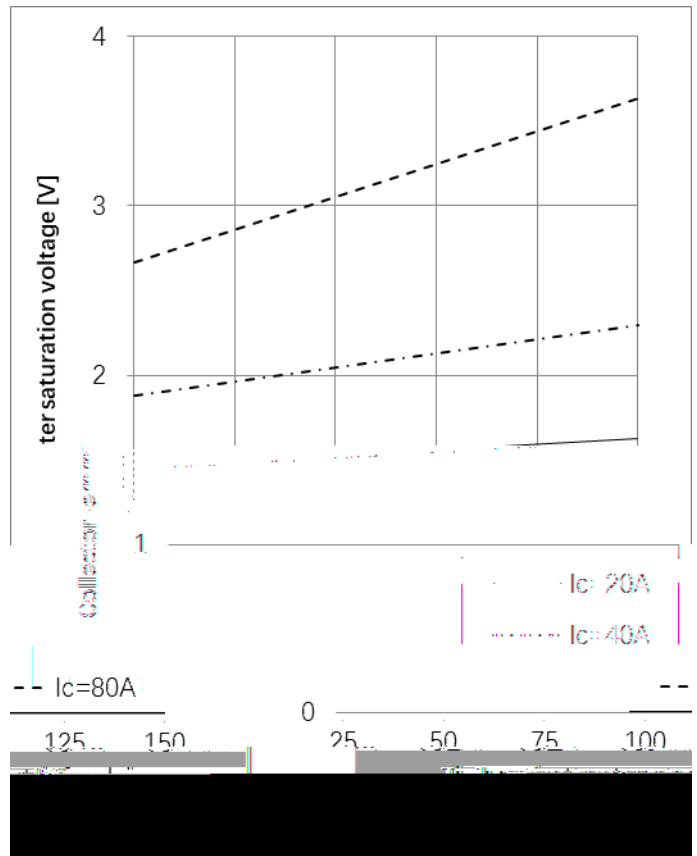
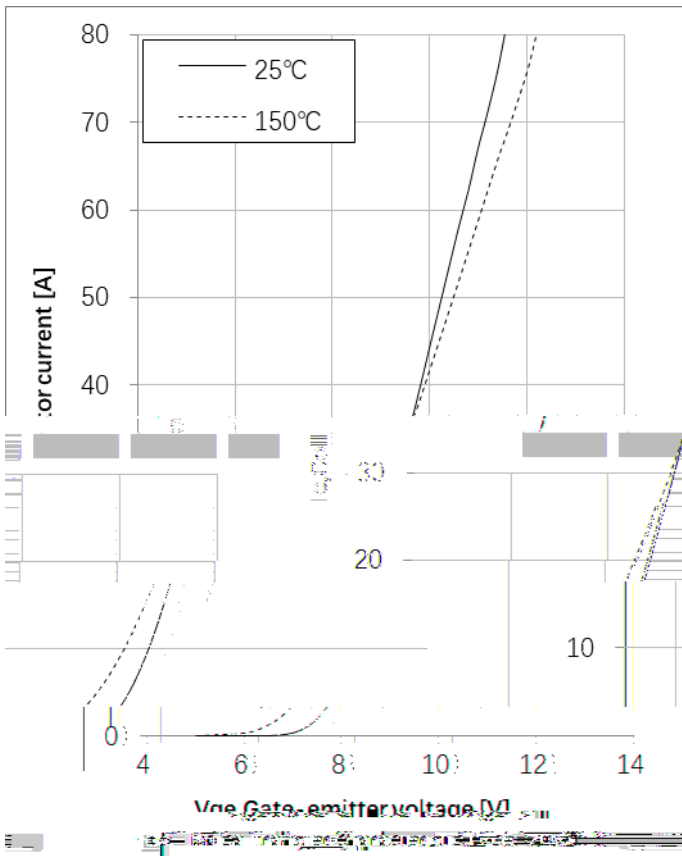
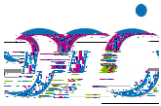


Electrical Characteristics of the DIODE

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dynamic , at T _j = 25						
Reverse Recovery Current	I _{rr}	I _F =40A, V _R =600V, di/dt= -510	-	14	-	A
Diode reverse recovery time	trr		-	305	-	ns
Reverse Recovery Charge	Q _{rr}		-	1.09	-	uC
Reverse Recovery Energy	E _{rec}		-	0.43	-	mJ
Dynamic , at T _j = 125						
Reverse Recovery Current	I _{rr}		-	15	-	A

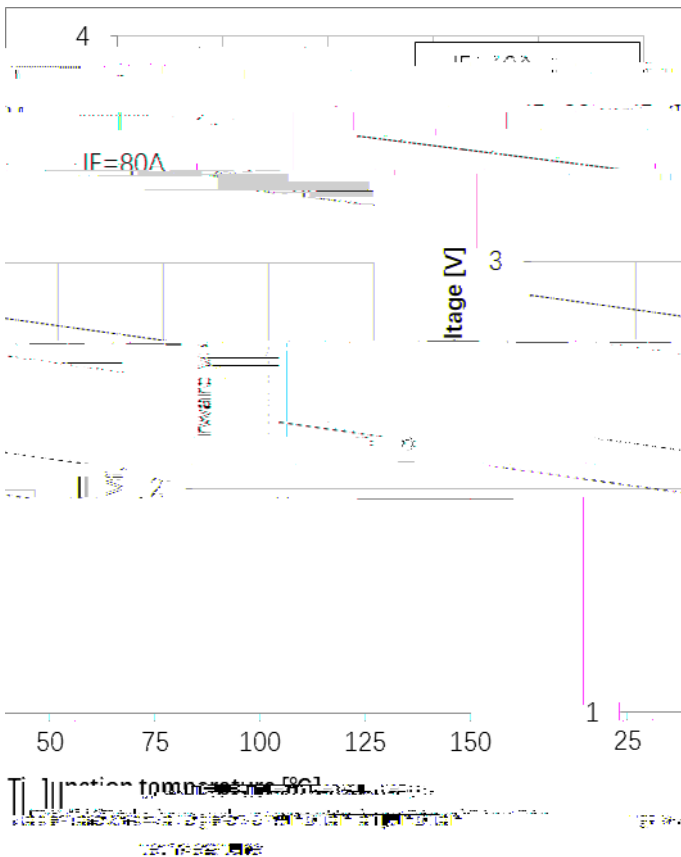
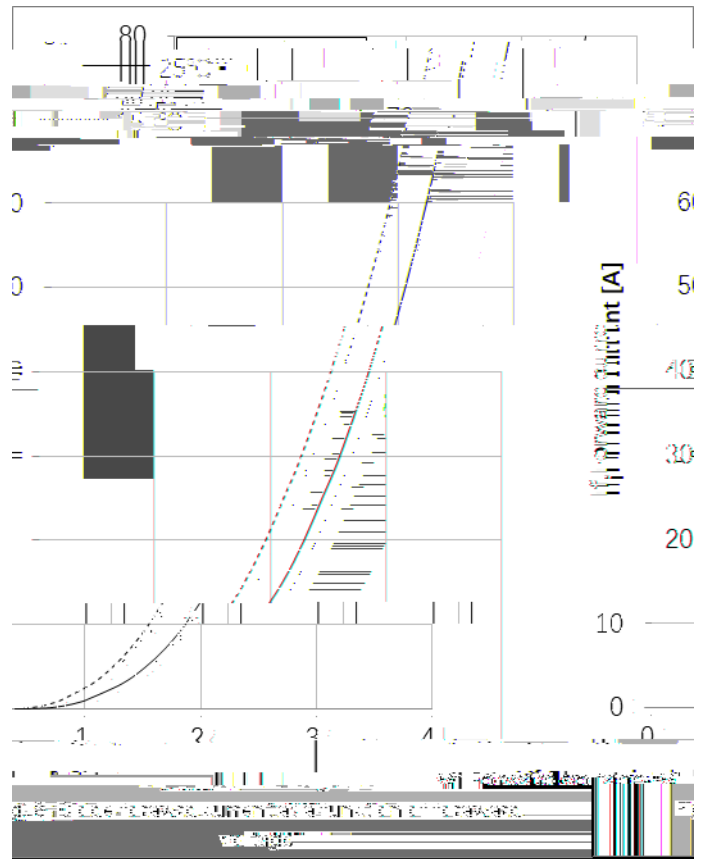
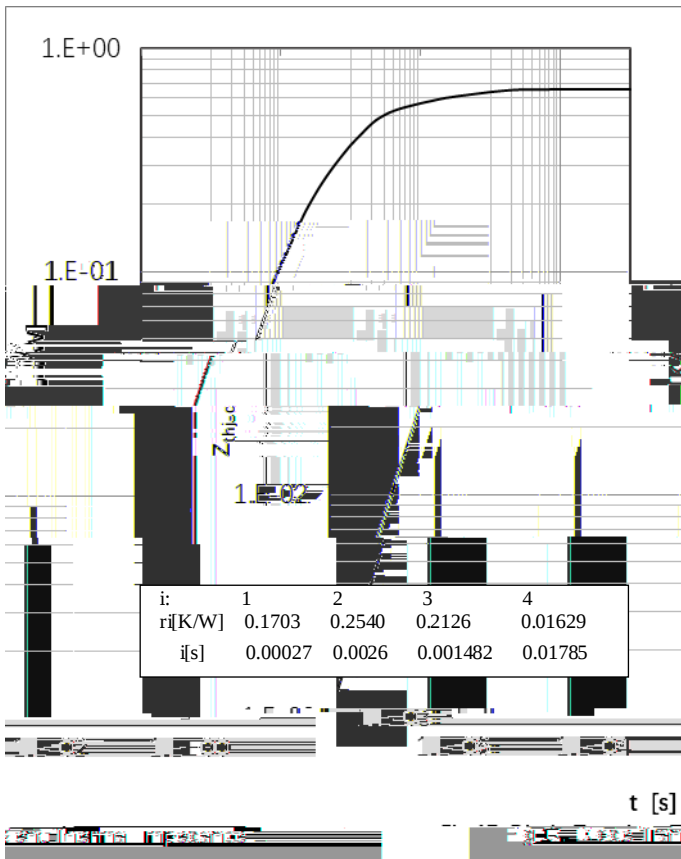
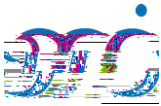
Diode reverse recovery time	trr	I _F =40A, V _R =600V di/dt= -510	-	446	-	ns
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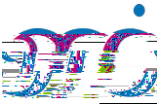




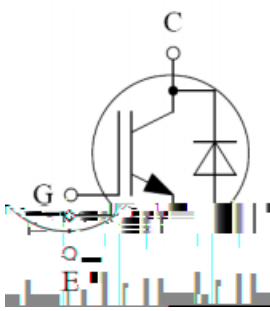


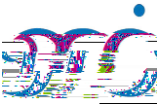
DGW40N120CTH0D





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