

## Maximum Ratings

Parameter	Symbol	Value	Unit
	$V_{CE}$	650	V



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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Static</b>						
Collector-Emitter Breakdown Voltage	$BV_{CES}$	$V_{GE}=0V, I_C$	650		-	V
Gate Threshold Voltage	$V_{GE(th)}$	$V_{GE}=V_{CE}, I_C=1.20mA$	4.25	4.75	5.25	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{GE}=15V, I_C=100A$ $T_j=25^\circ C,$ $T_j=125^\circ C$ $T_j=150^\circ C$	0.90	1.25 1.35 1.40	1.60	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 3.00	mA

Gate-Emitter  
Leakage Current



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

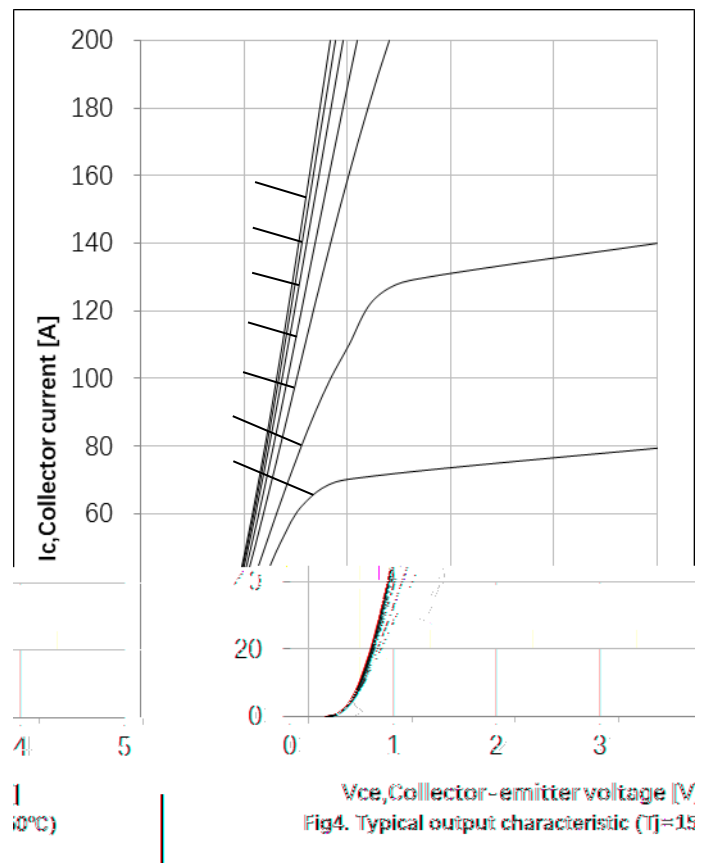
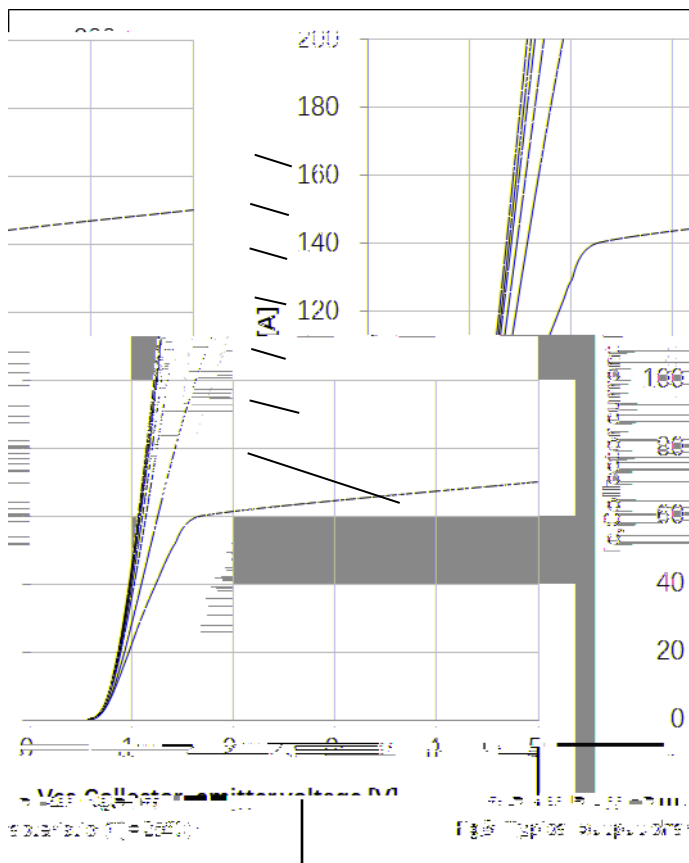
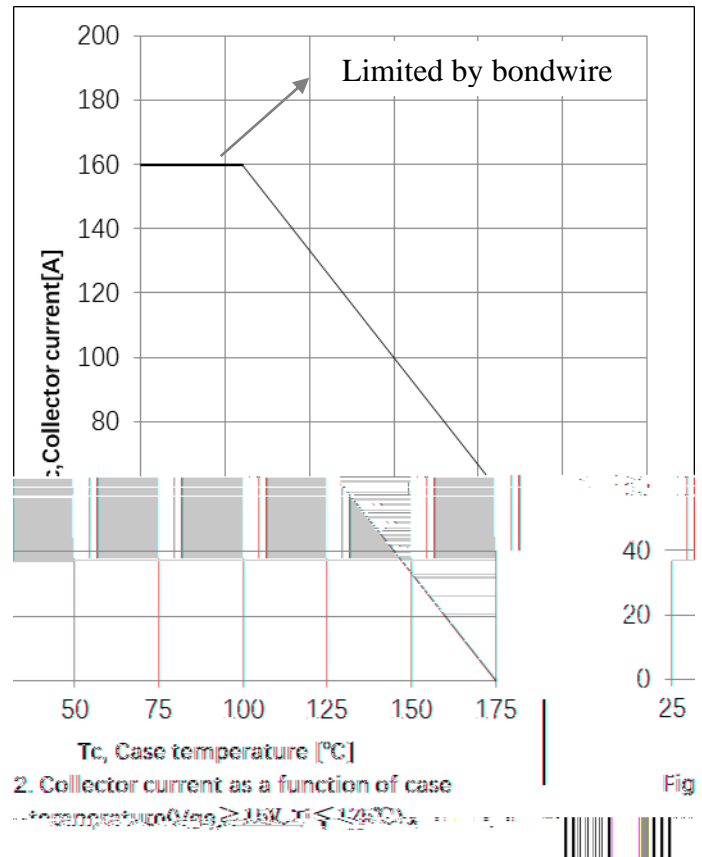
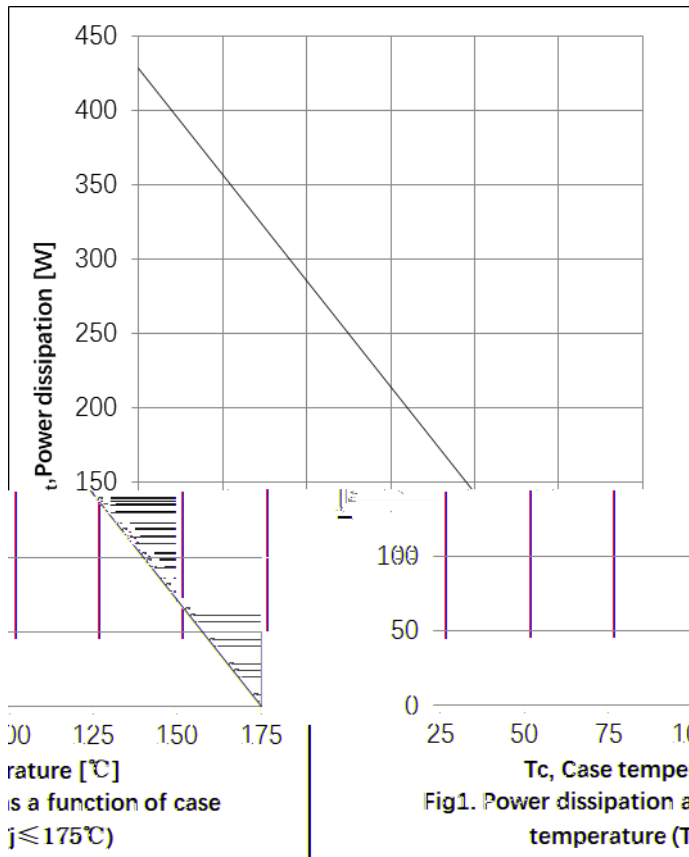
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Static</b>						
Diode Forward Voltage	$V_F$	$I_F=100A$ $T_j=25^\circ C$ , $T_j=125^\circ C$ $T_j=150^\circ C$		1.40 1.35 1.30	1.90	V

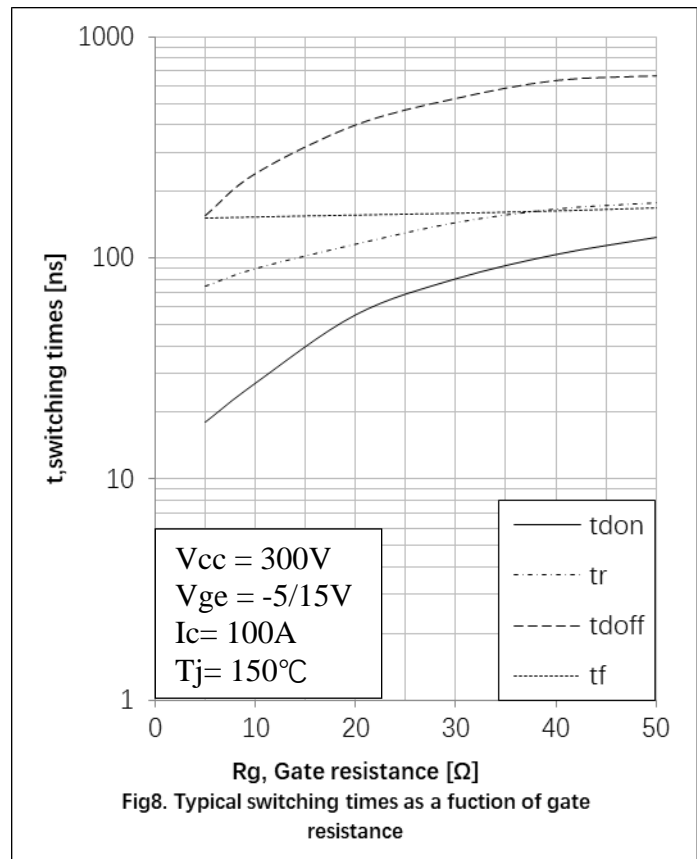
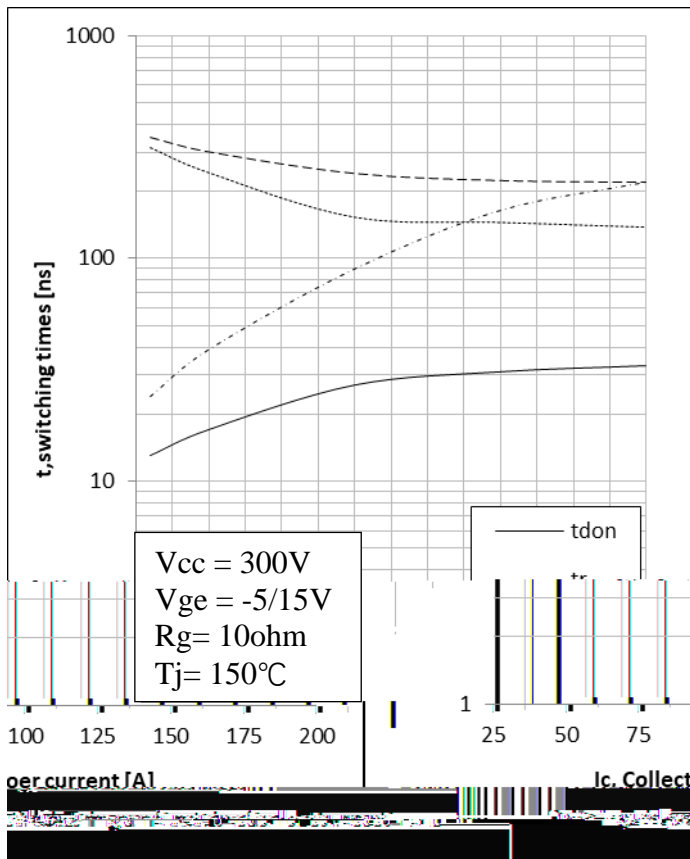
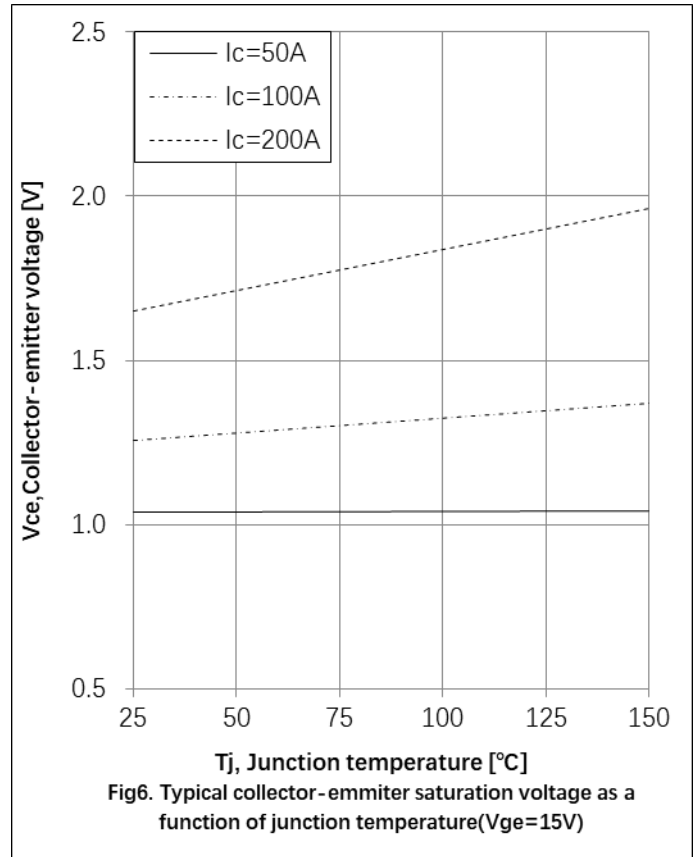
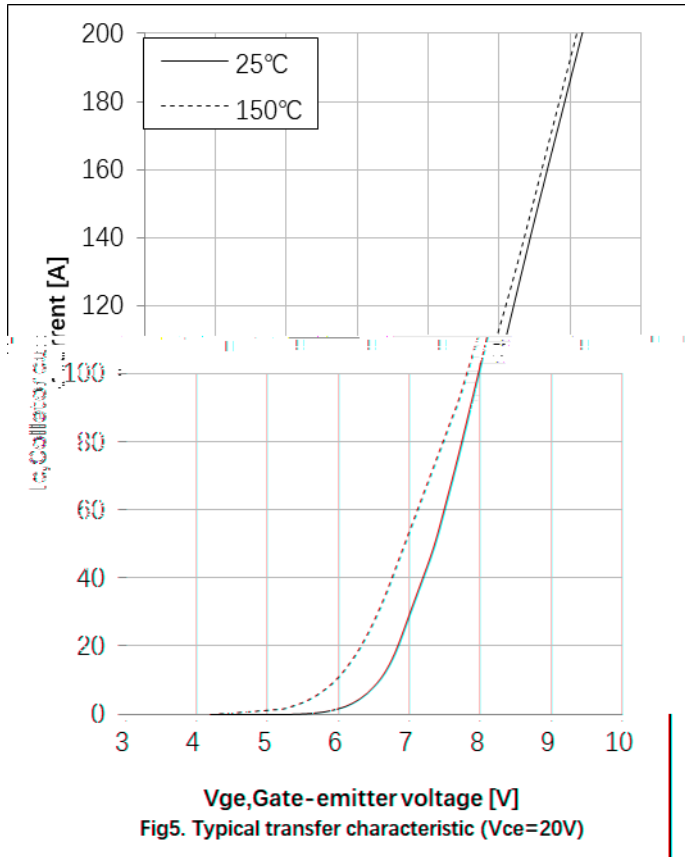
## Switching Characteristic, Inductive Load

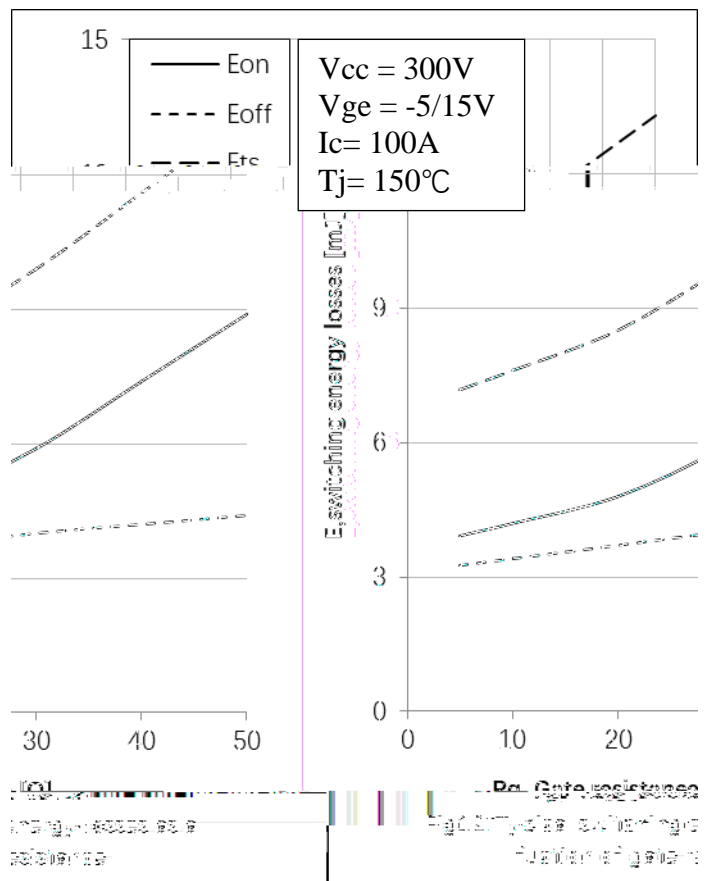
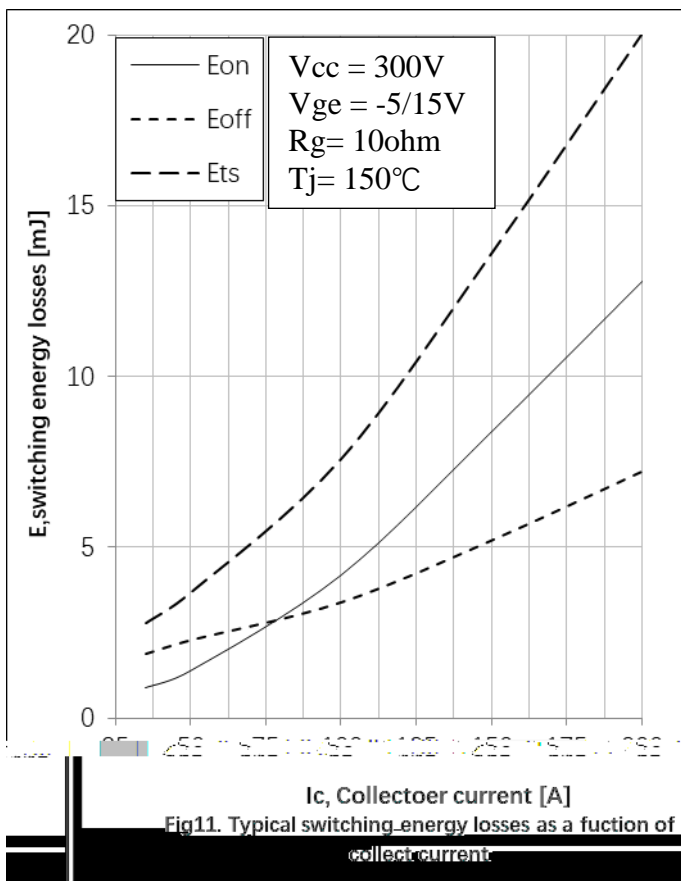
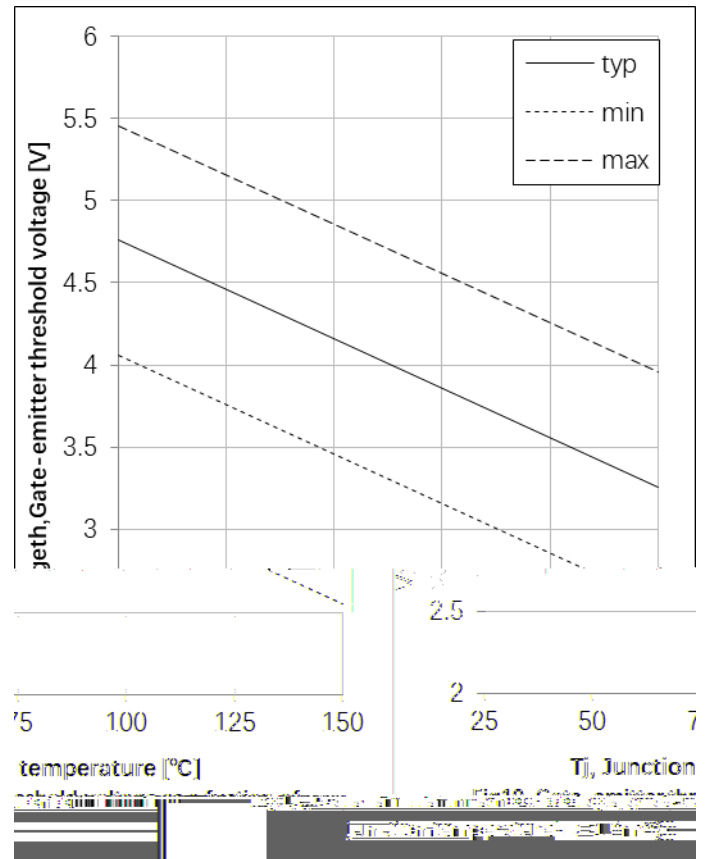
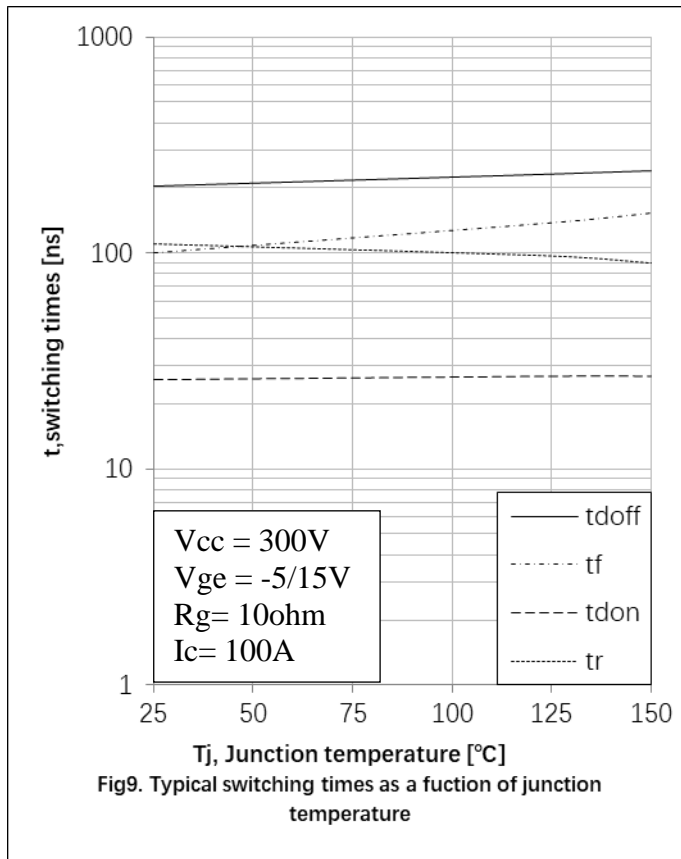
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Dynamic , at <math>T_j=25</math></b>						
Turn-on Delay Time	$t_{d(on)}$	$V_{CC}=300V$ , $I_C=100A$ , $V_{GE}=-5V\sim 15V$ , $R_g=10$ Inductive Load	-	26	-	ns
Rise Time	$t_r$		-	110	-	ns
Turn-on Energy	$E_{on}$		-	4.0	-	mJ
Turn-off Delay Time	$t_{d(off)}$		-	204	-	ns
Fall Time	$t_f$		-	100	-	ns
Turn-off Energy	$E_{off}$		-	2.4	-	mJ
Total switching energy	$E_{ts}$		-	6.4	-	mJ
<b>Dynamic , at <math>T_j=125</math></b>						
Turn-on Delay Time	$t_{d(on)}$	$V_{CC}=300V$ , $I_C=100A$ , $V_{GE}=-5V\sim 15V$ , $R_g=10$ Inductive Load	-	27	-	ns
Rise Time	$t_r$		-	97	-	ns
Turn-on Energy	$E_{on}$		-	4.1	-	mJ
Turn-off Delay Time	$t_{d(off)}$		-	232	-	ns
Fall Time	$t_f$		-	138	-	ns
Turn-off Energy	$E_{off}$		-	3.1	-	mJ
Total switching energy	$E_{ts}$		-	7.2	-	mJ
<b>Dynamic , at <math>T_j=150</math></b>						
Turn-on Delay Time	$t_{d(on)}$	$V_{CC}=300V$ , $I_C=100A$ , $V_{GE}=-5V\sim$				



# DGQ100N65CTL1D

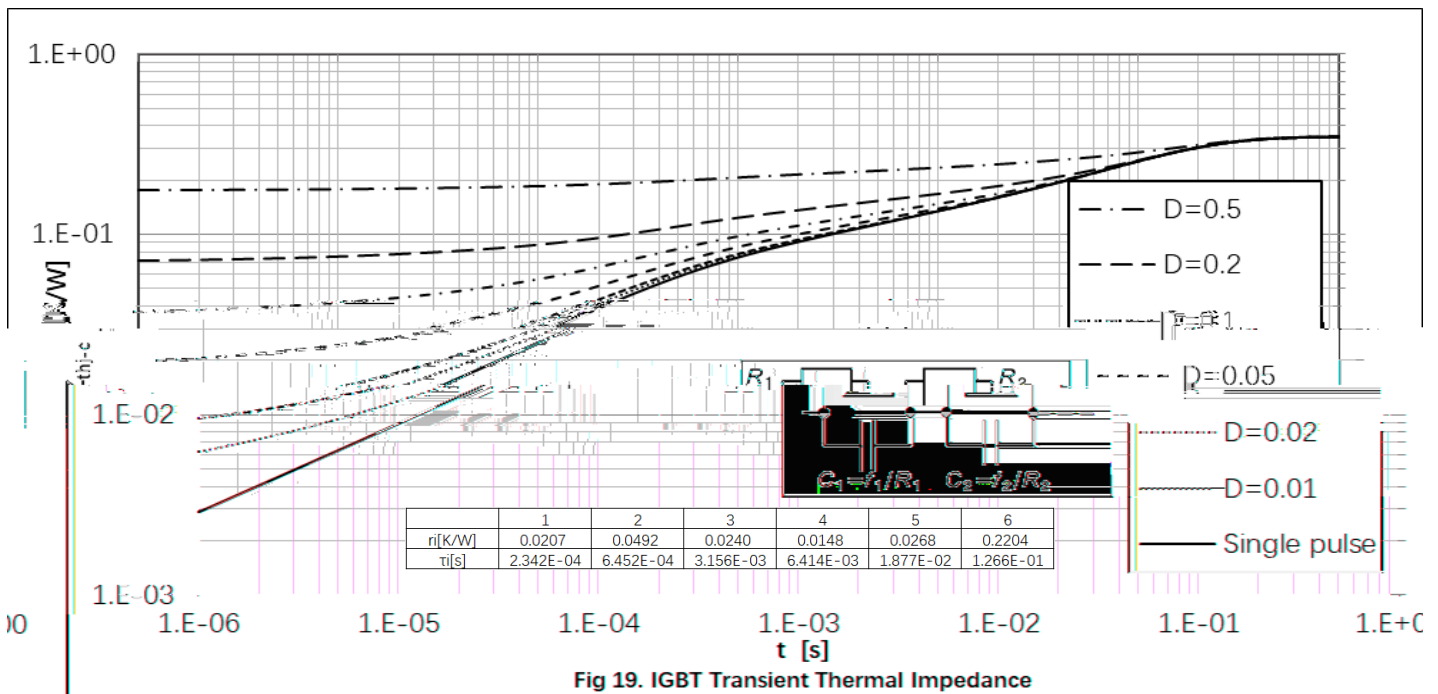
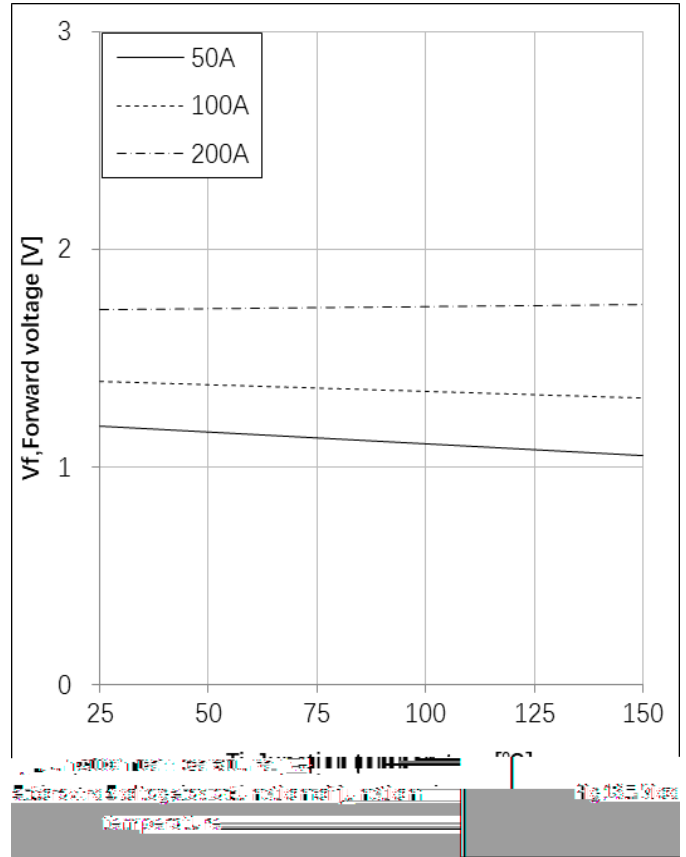
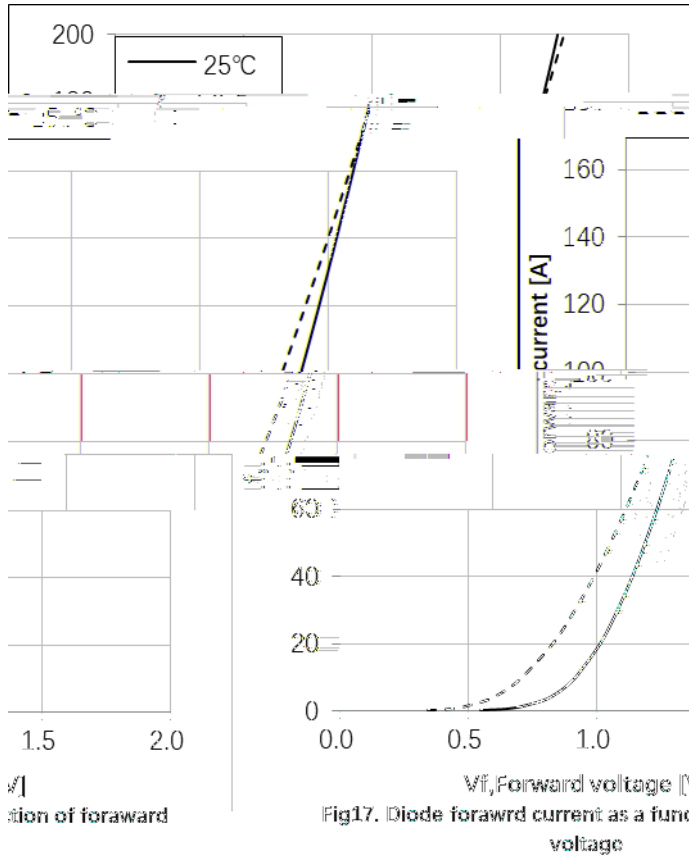








# DGQ100N65CTL1D





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**RoHS**  
COMPLIANT

