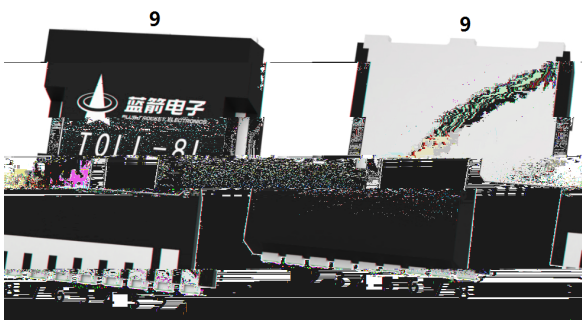
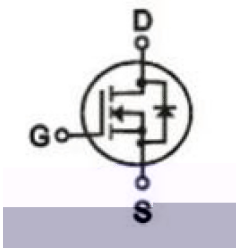


TOLL-8L N
 N-Channel MOSFET in a TOLL-8L Plastic Package .

$V_{DS}(V)=100V$ $I_D=250A$
 $R_{DS(ON)}@10V \leq 1.4m\Omega$ (Typ. $1.2m\Omega$)
 。 HF Product.

DC/DC
 DC/DC converter, Power switch, Motor drives.



PIN1: G PIN2、3、4、5、6、7、8: S PIN9: D

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current - Continuous		I_D	250	A
Drain Current - Continuous		$I_D(T_C=100^\circ\text{C})$	212	A
Drain Current – Pulsed		I_{DM}	1000	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		P_{tot}	313	W
Single Pulse Avalanche Energy($V_{DS}=50V, V_{GS}=10V, L=0.3mH$)		E_{AS}	626	mJ
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	Steady-State	$R_{\theta JA}$	40	/ W
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	0.4	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu A, V_{GS}=0V$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V, V_{GS}=0V$			1	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2.5	3.3	4.1	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=100A$		1.2	1.4	m Ω
Diode Forward Voltage	V_{SD}	$I_S=100A, V_{GS}=0V$		0.9	1.2	V
Reverse recovery time	t_{rr}	$V_{DS}=50V, I_F=50A$ $di/dt=100A/\mu s$		92		ns
Reverse recovery charge	Q_{rr}			236		nC
Gate Resistance	R_g	$f=1MHz$		1.7		Ω
Input Capacitance	C_{iss}	$V_{DS}=50V, V_{GS}=0V$ $f=1.0MHz$		12000		pF
Output Capacitance	C_{oss}			3000		
Reverse Transfer Capacitance	C_{rss}			128		
Total Gate Charge	Q_g	$V_{GS}=10V, I_D=100A$ $V_{DS}=50V$		230		nC
Gate Source Charge	Q_{gs}			67		
Gate Drain Charge	Q_{gd}			80		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=50V$ $R_G=4.7\Omega$ $I_D=100A$		55		ns
Turn-On Rise Time	t_r			92		
Turn-Off Delay Time	$t_{d(off)}$			26		
Turn-Off Fall Time	t_f			35		

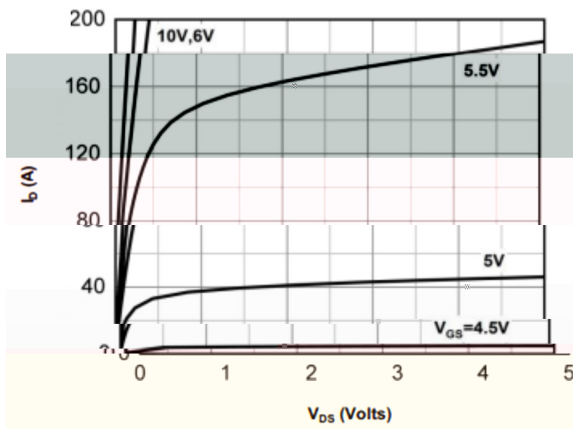


Figure 1: On-Resistance Characteristics

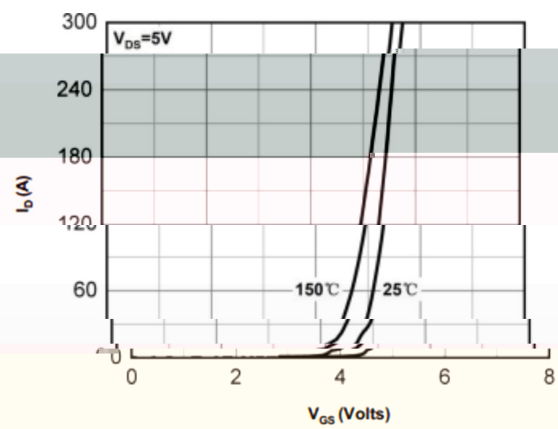


Figure 2: Transistor Characteristics

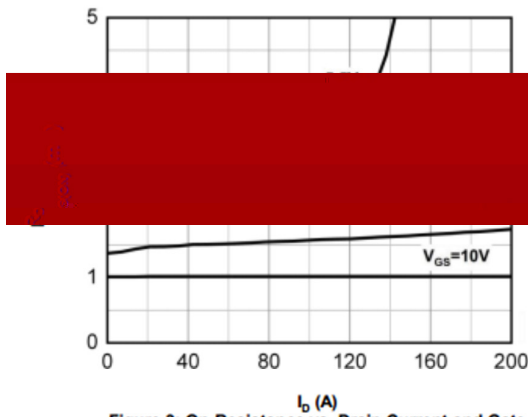


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

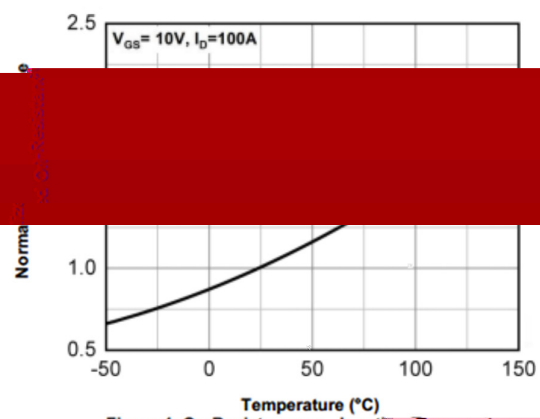


Figure 4: On-Resistance vs. Temperature

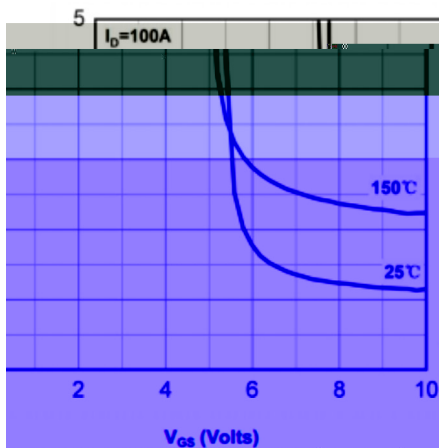


Figure 5: Body Diode Characteristics

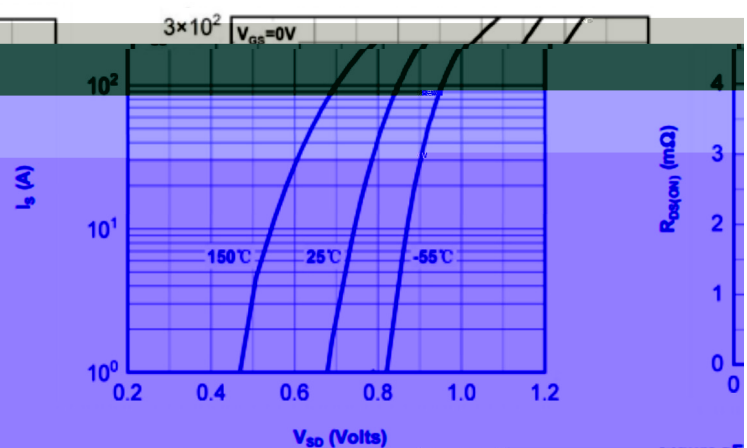
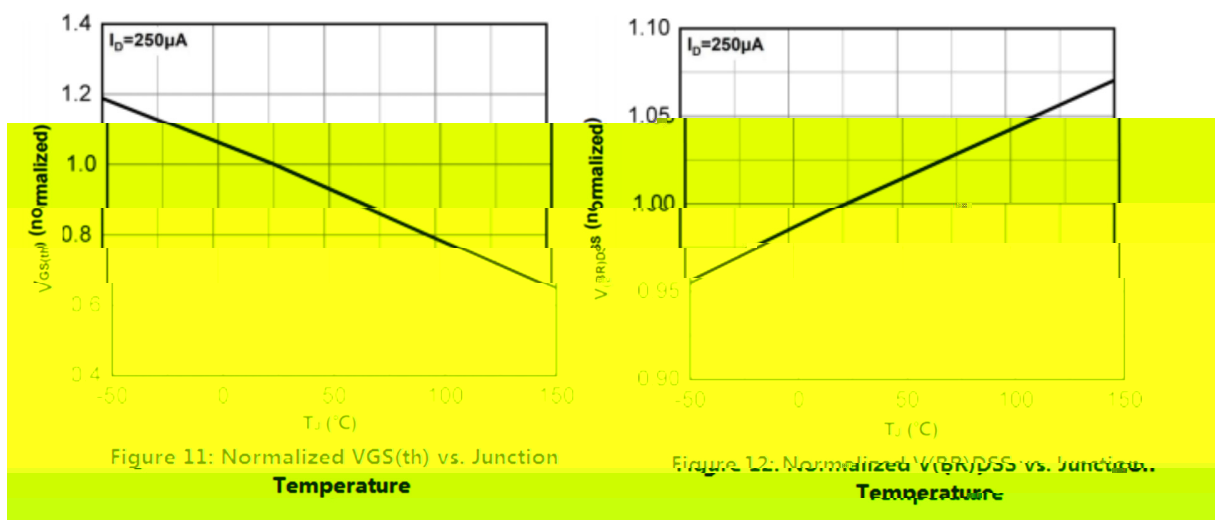
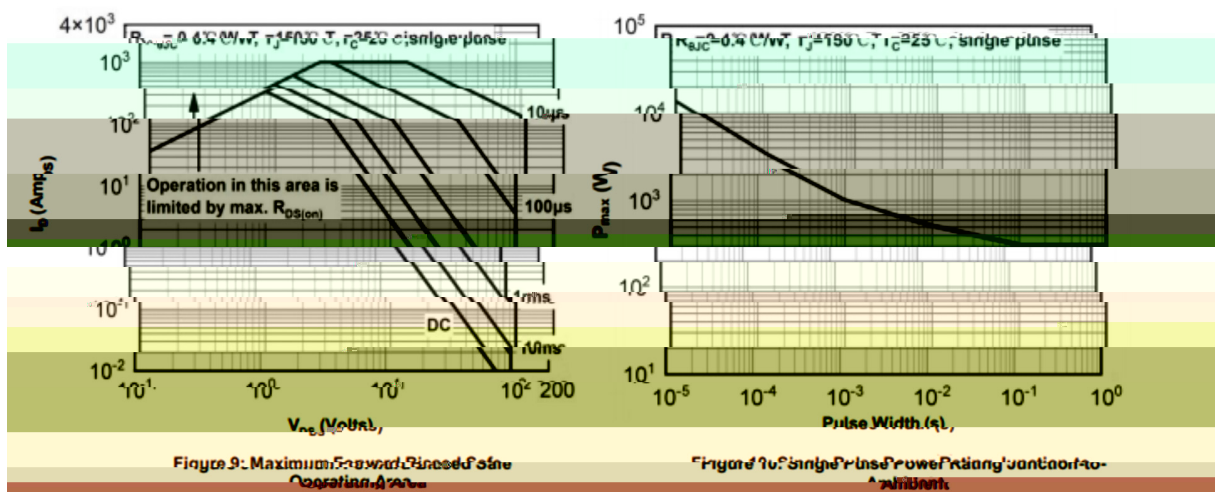
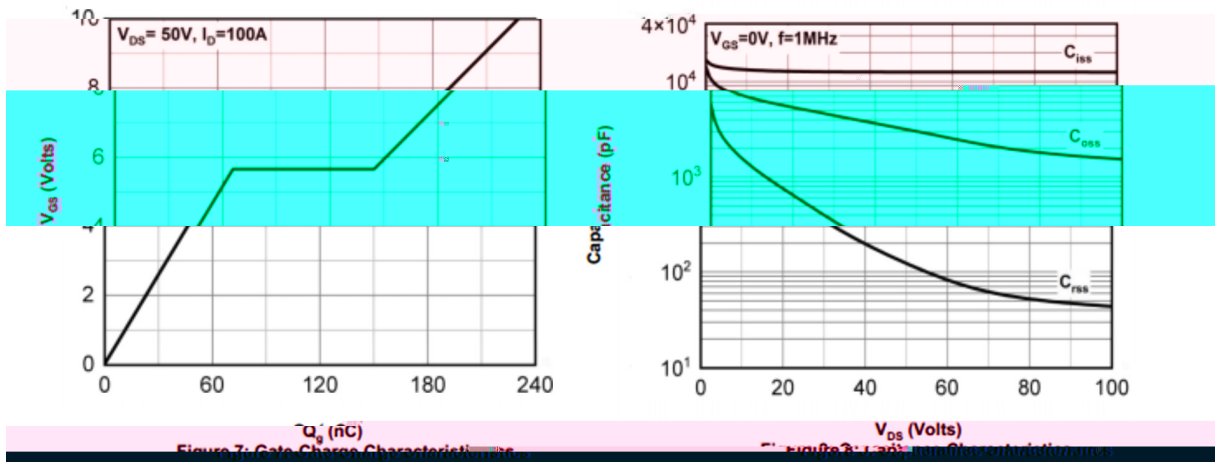


Figure 6: Body Diode Characteristics



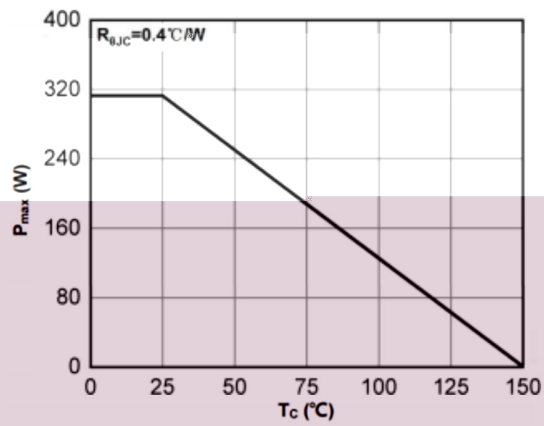


Figure 13: Max. Power Dissipation vs. Case Temperature

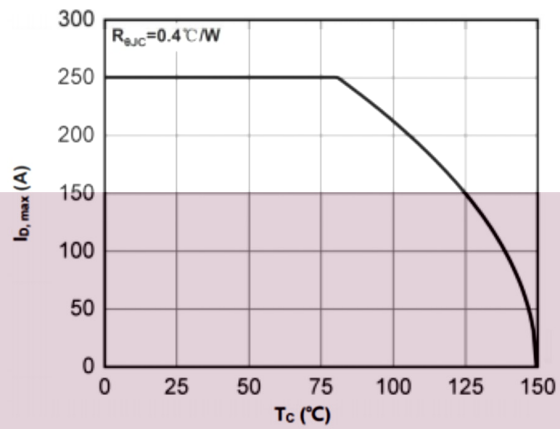


Figure 14: Max. Continuous Drain Current vs. Case Temperature

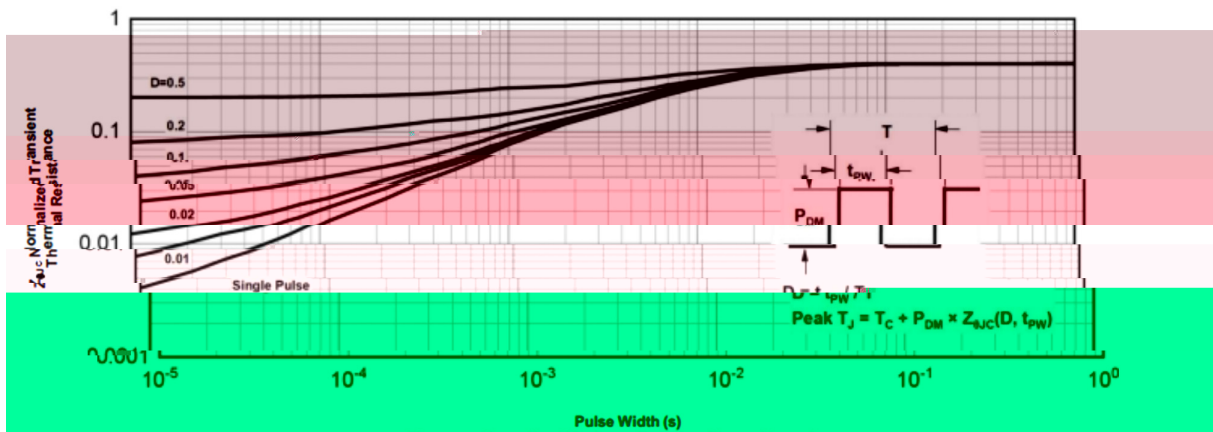
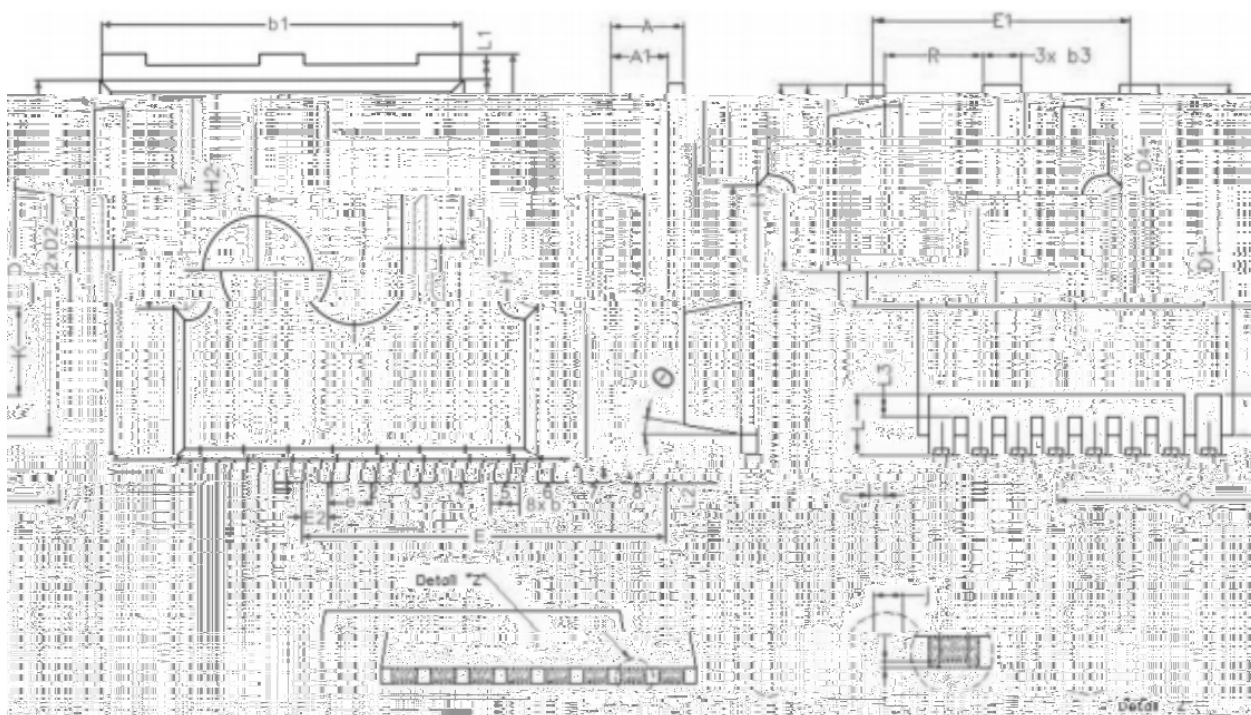
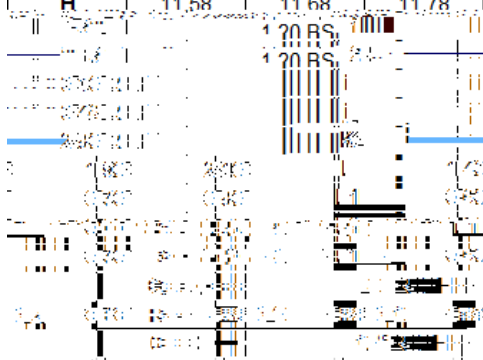


Figure 15: Normalized Maximum Transient Thermal Impedance



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	2.20	2.30	2.40
A1	1.70	1.80	1.90
b	0.70	0.80	0.90
b1	9.70	9.80	9.90
b3	1.10	1.20	1.30
c	0.40	0.50	0.60
D	10.28	10.38	10.48
D1	10.98	11.08	11.18
D2	3.20	3.30	3.40
D4	4.45	4.55	4.65
E	9.80	9.90	10.00
E1	8.00	8.10	8.20
E2	0.60	0.70	0.80
e	1.20 BSC		
H	11.58	11.68	11.78



Temperature Profile for IR Reflow Soldering(Pb-Free)

- 1

150 180

60 90sec;
- 2

245±5

5±0.5sec;
- 3

2 10 /sec.
- Note:

1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245±5 , Duration:5±0.5sec.

3. Cooling Speed: 2~10 /sec.

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL