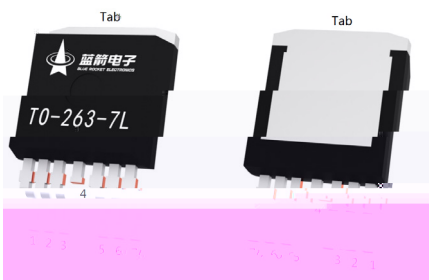
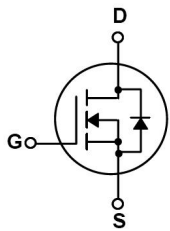


Rev.A Jul.-2025

TO-263-7L N
N-CHANNEL MOSFET in a TO-263-7L Plastic Package.

$V_{DS}=100V$ $I_D=300A$
 $R_{DS(on)}@10V$ 1.3m (Type. 1.1m)
 $R_{DS(on)}@6V$ 1.9m (Type. 1.5m)
 HF Product.

BMS
 BMS, High power inverter system, Drones, Light electric vehicles.



PIN1 G PIN 2 3 5 6 7 S PIN 4 Tab D

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current DC ***		$I_D(T_C=25^\circ\text{C})$	300	A
		$I_D(T_C=100^\circ\text{C})$	150	A
Pulsed Drain Current*,**,***		I_{DM}	1200	A
Gate-Source Voltage		V_{GS}	± 20	V
Continuous-Source Current		$I_S(T_C=25^\circ\text{C})$	300	A
Single Pulsed Avalanche Energy $L=1.0\text{mH}^*$		E_{AS}	1250	mJ
Total Power Dissipation		$P_D(T_C=25^\circ\text{C})$	500	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 175	
Thermal Resistance-Junction to Ambient*	Steady-State	R_{JA}	30	/W
Thermal Resistance-Junction to Case*	Steady-State	R_{JC}	0.3	

Notes:

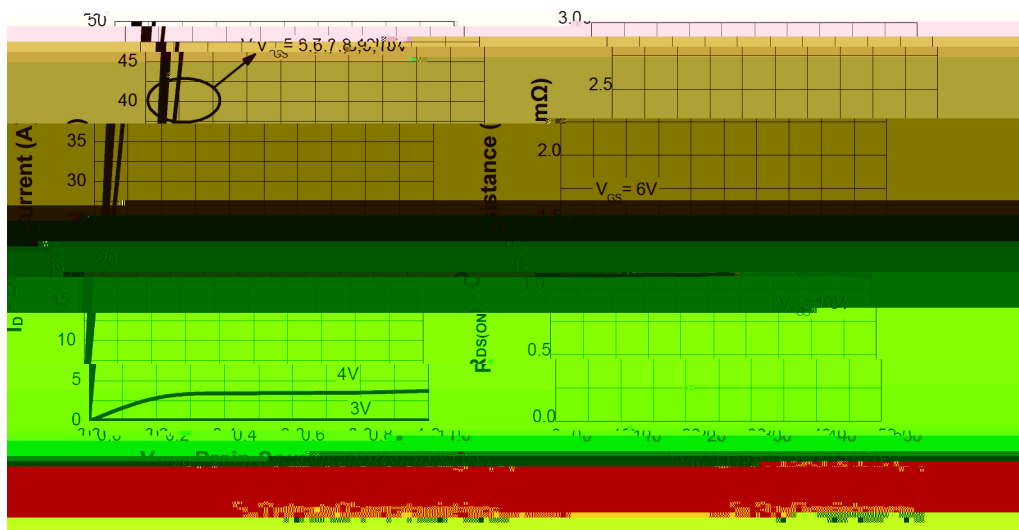
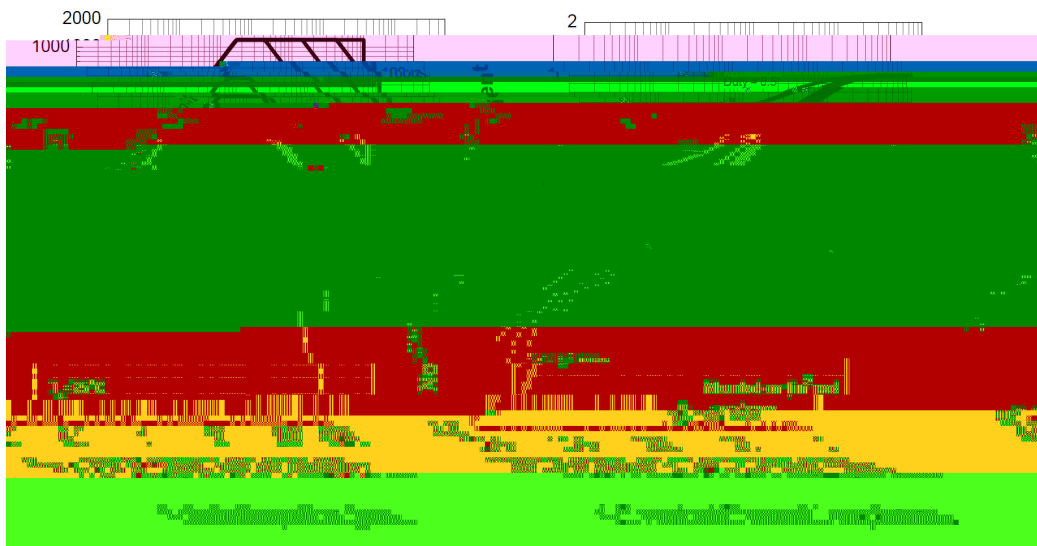
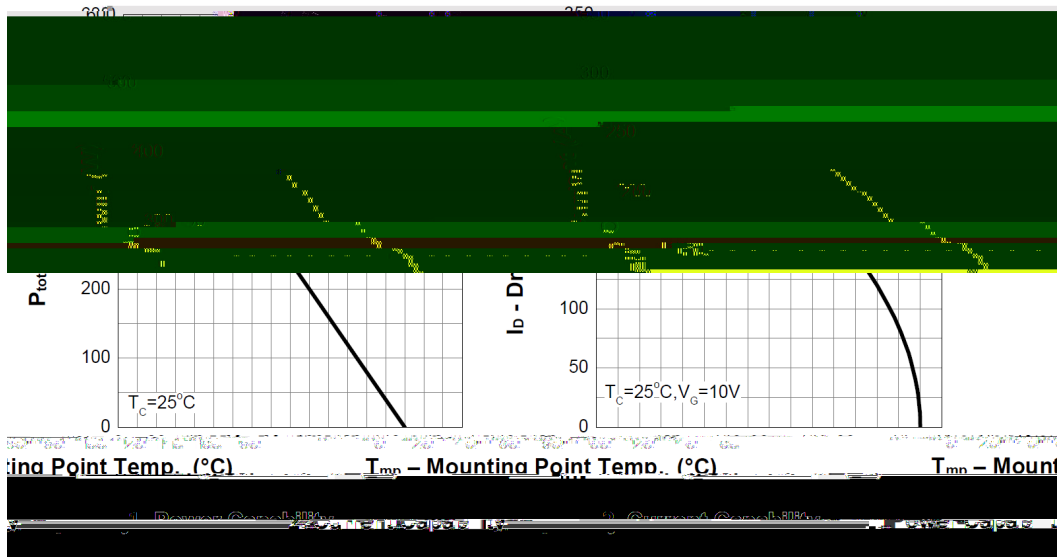
 * Surface Mounted on 1 in² pad area, $t = 10$ sec

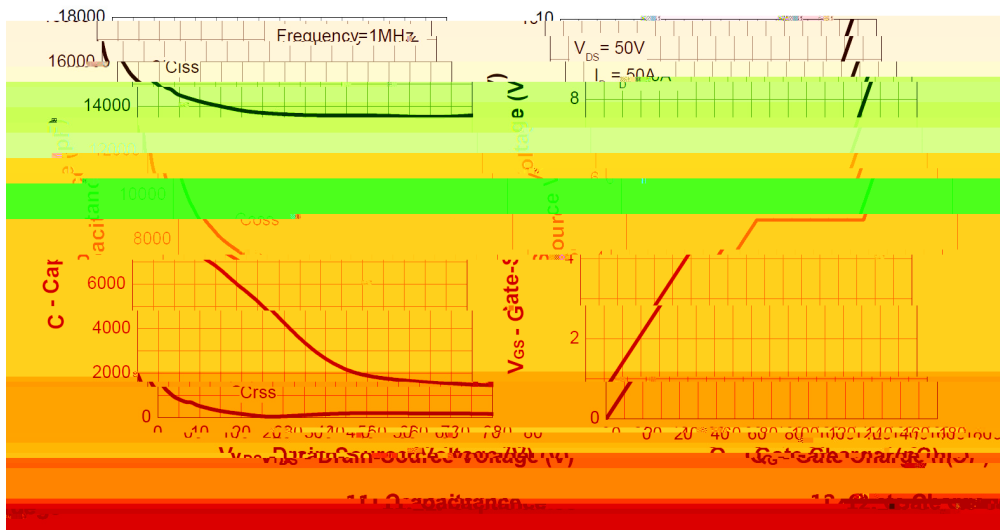
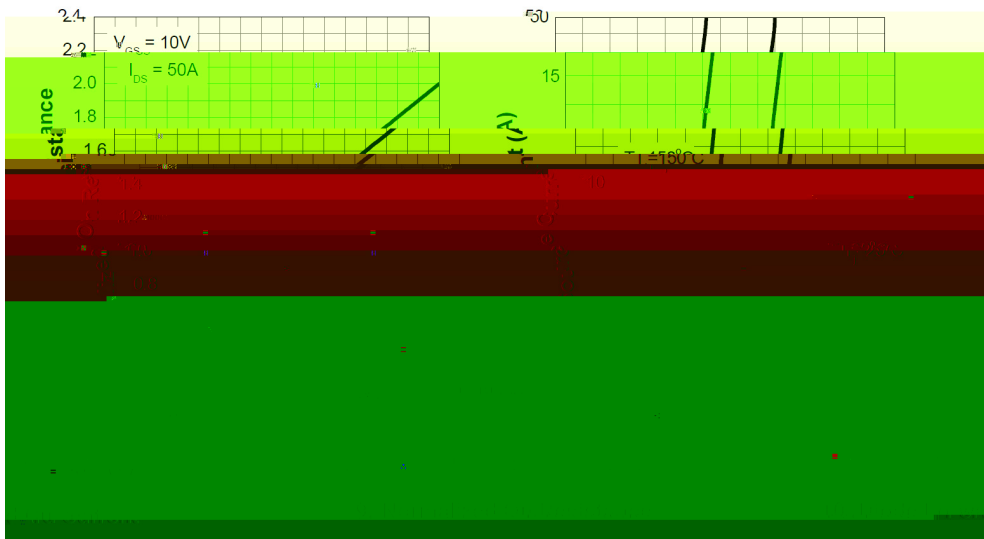
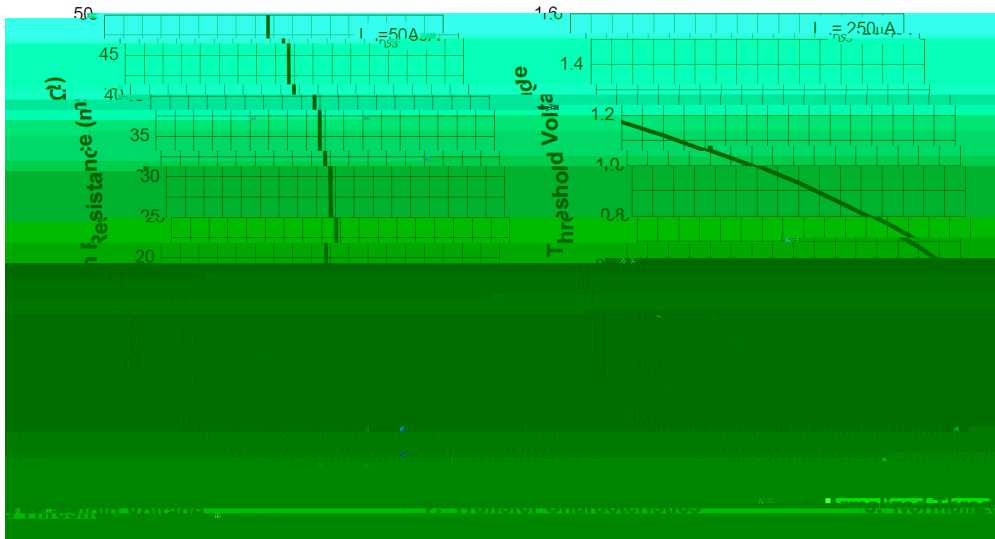
 ** Pulse width 300 μ s, duty cycle 2 %

*** Limited by bonding wire

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250$ A	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=80V$ $V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250$ A	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=50A$		1.1	1.3	m
		$V_{GS}=6V$ $I_D=25A$		1.5	1.9	
Forward On Voltage	V_{SD}	$V_{GS}=0V$ $I_S=50A$			1.3	V
Reverse Recovery Time	t_{rr}	$I_{DS} = 50$ A, $V_{GS} = 0$ V $di_{SD}/dt = 100$ A/ s		137		nS
Reverse Recovery Charge	Q_{rr}			347		nC
Input Capacitance	C_{iss}	$V_{DS}=50V$ $V_{GS}=0V$ $f=1\text{MHz}$				pF
Reverse Transfer Capacitance						

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_g(10V)$	$V_{GS}=10V$ $V_{DS}=50V$ $I_D=50A$		244		nC
Gate Source Charge	Q_{gs}			46		
Gate Drain Charge	Q_{gd}			67		
Turn-On Delay Time	$t_{d(on)}$			29		
$T_u R_s T_u$		$V_{GS}=10V$ $V_{DS}=50V$ $R_L=2.5$ $R_G=4.5$ $I_{DS}=50A$				nS







Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
D1	6.86	7.42	A	4.30	4.70
E	9.68	10.09	M1		0.25
1	7.70	8.30	A2	2.20	2.60
0.85	e	1.27 BSC	b		0.65
0.80	e1	7.62 BSC	b1		0.65
1.00	L	1.78	2.79	b2	0.80
0.60	L2	-	1.78	c	0.45
0.55	L3	0.25BSD		c1	0.45
1.40	H	14.61	15.88	c2	1.25
9.40				D	9.00

Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- | | | | |
|---|-----------|-------------|---|
| 1 | 150 ~ 180 | 60 ~ 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | 2 ~ 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

605±5