TOLL-8L N

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

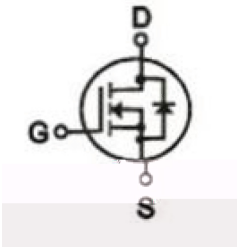
V_{DS}(V)=40V I_D=395A

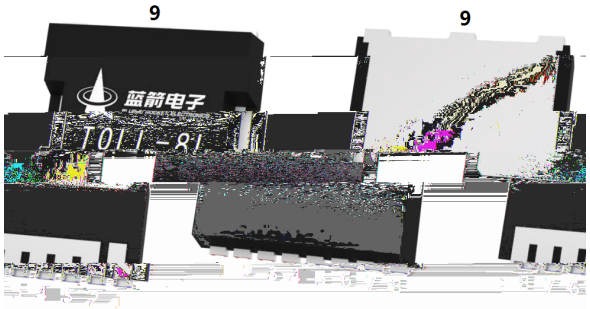
$R_{DS(ON)}$@10V≤1.3mΩ(Typ. 0.85mΩ)

HF Product.

-

Motor drivers, Battery management,DC - DC Converter.



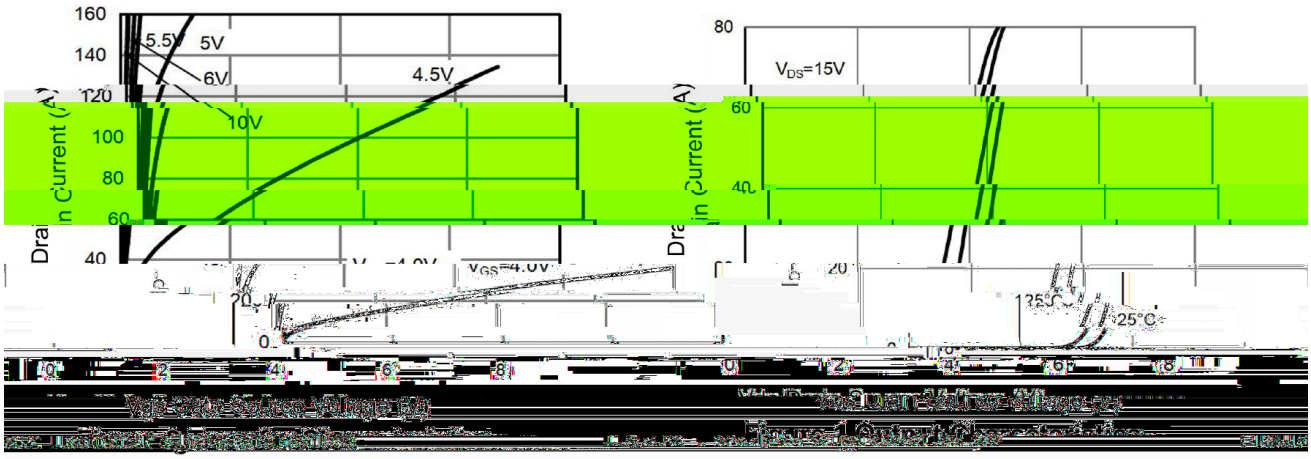


PIN1 G PIN2 3 4 5 6 7 8 S PIN9 D

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current - Continuous	I_D	395	A
Drain Current - Continuous	$I_D(T_c$=100)	250	A
Drain Current – Pulsed	I_{DM}	1580	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	P_{tot}	272	W
Single Pulse Avalanche Energy	E_{AS}	1369	mJ
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient			

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=20V R_G=1.6Ω		32		ns
Turn-On Rise Time	t_r			65		
Turn-Off Delay Time	$t_{d(off)}$			75		
Turn-Off Fall Time	t_f			40		



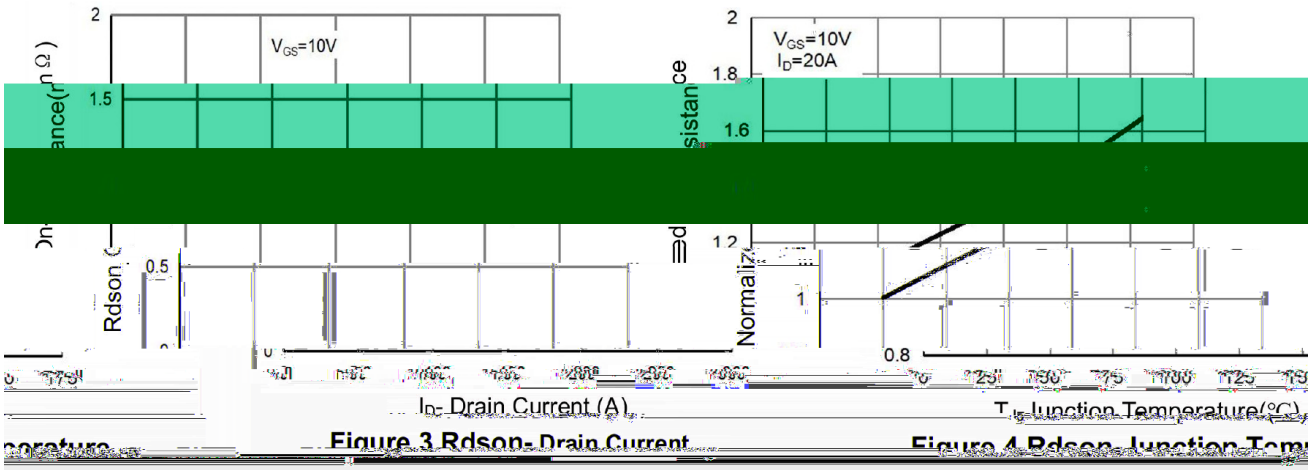


Figure 3 Rdson- Drain Current

Figure 4 Rdson- Junction Tem

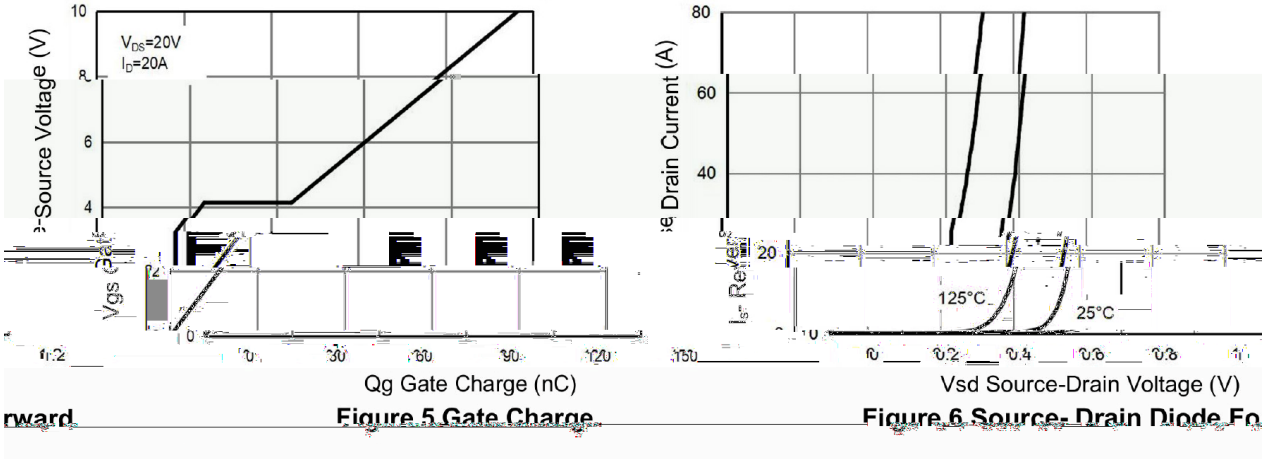


Figure 5 Gate Charge

Figure 6 Source- Drain Diode Fo

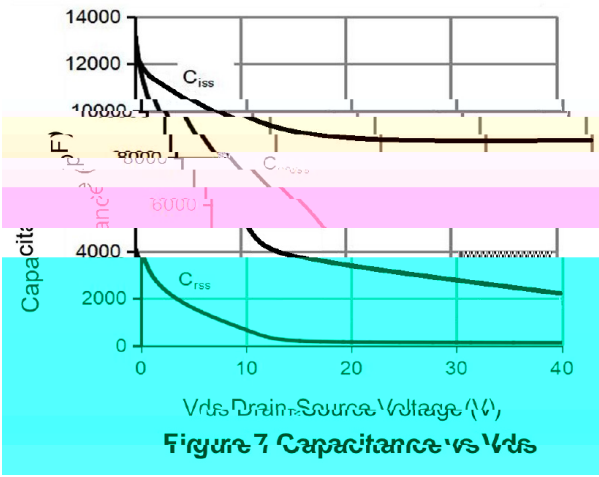


Figure 7 Capacitance vs Vds

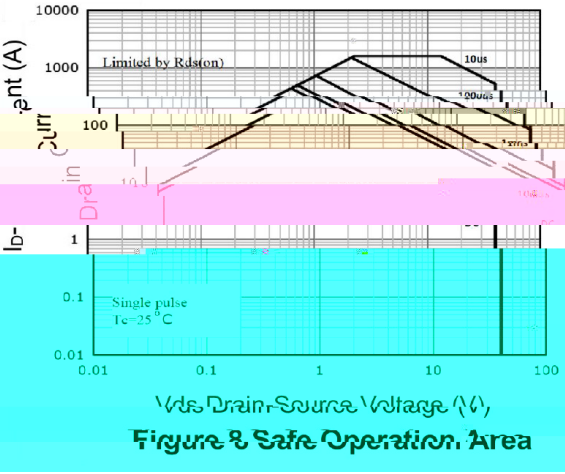


Figure 8 Safe Operation Area

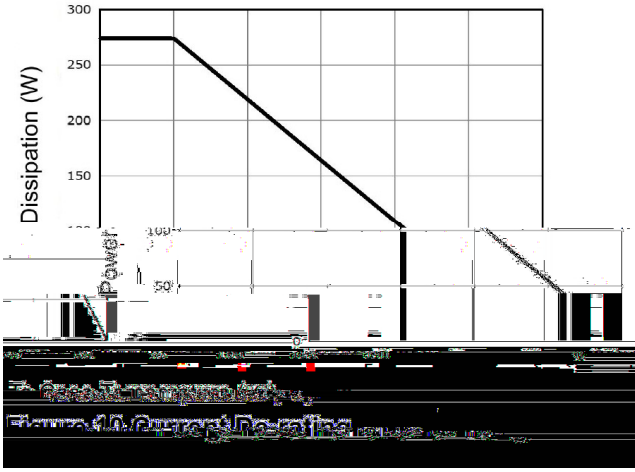


Figure 9 Power De-rating

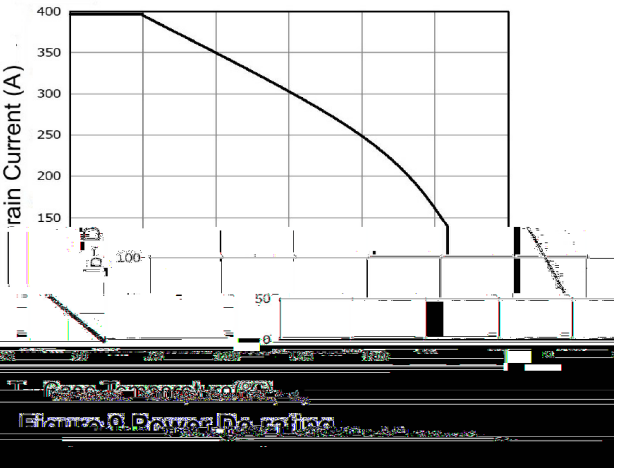


Figure 10 Current De-rating

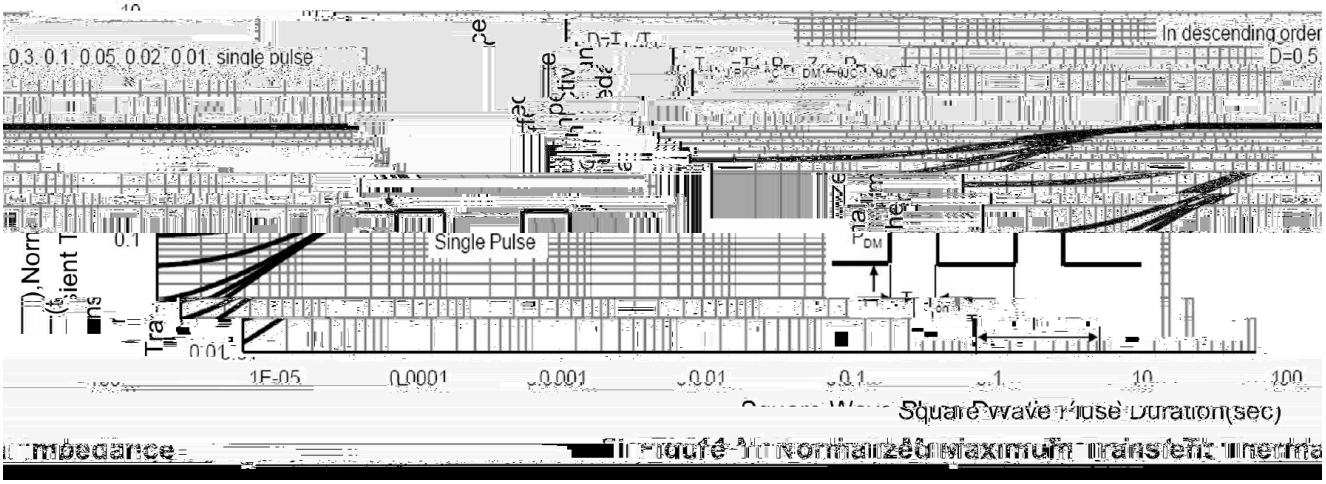
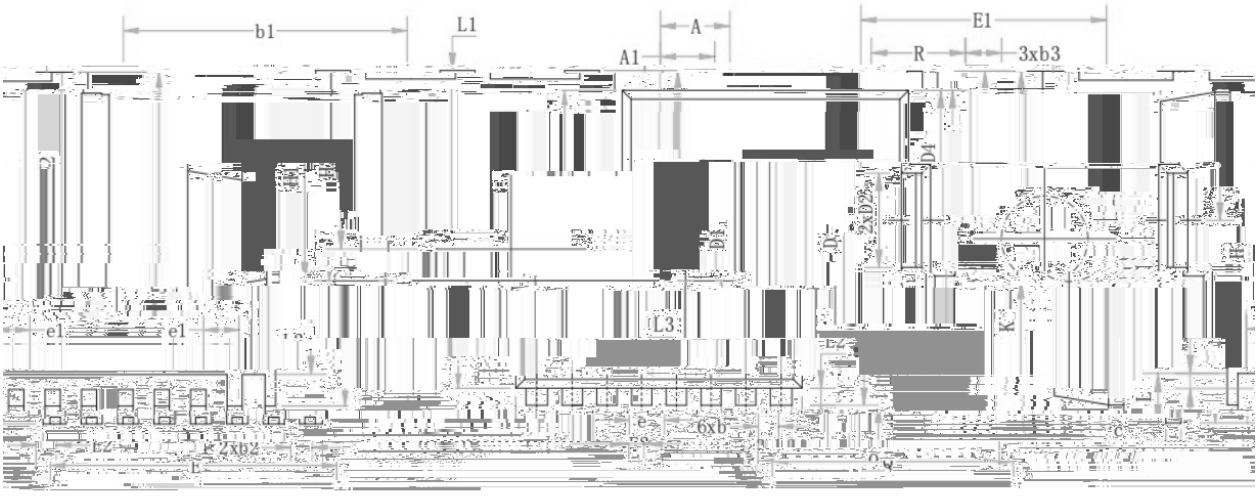
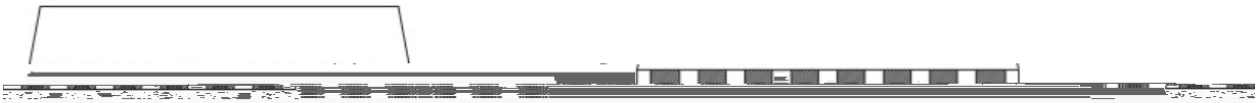


Figure 11 Normalized Maximum Transient Thermal Impedance

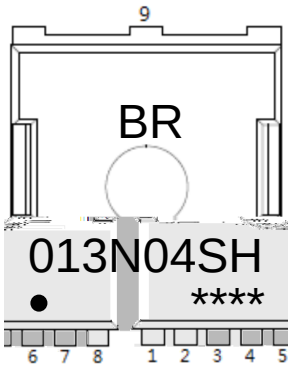


Top View Bottom View



Side View

Symbol	Min	Typ	Max	Symbol	Min	Typ	Max
A	2.25	2.30	2.35	E	9.85	9.90	9.95
A1	1.75	1.80	1.85	E1	8.00	8.10	8.20
b	0.65	0.70	0.75	E2	0.65	0.70	0.75
b1	9.75	9.80	9.85	H1	11.60	11.70	11.80
b2	0.70	0.75	0.80	Hf1	6.95 BSC		
b3	1.15	1.20	1.25	H2	5.90 BSC		
c	0.45	0.50	0.55	K	3.10 REF		
D	10.35	10.40	10.45	L	1.55	1.65	1.75
D1	11.00	11.10	11.20	L1	0.65	0.70	0.75
D2	3.25	3.30	3.35	L2	0.50	0.60	0.7
D4	4.50	4.55	4.60	L3	0.40	0.50	0.
e	1.20 BSC			Q	7.95 REF		
e1	1.225 BSC			R	3.00	3.10	3

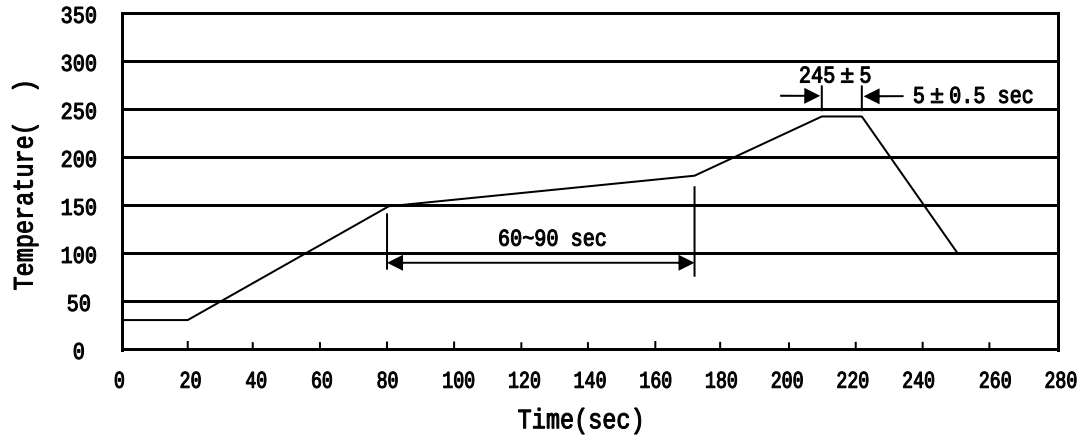


013N04SH

Note

BR	Company Code
013N04SH	Product Type Code
****:	Lot No. Code, code change with Lot No.

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.

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ REEL

Package Type	Units					Dimension		(unit mm³)
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TOLL-8L	2,000	1	2,000	6	12,000	13''×24	360×360×50	380×335×366

All information provided in this document is subject to legal disclaimers.