

Rev.A Feb.-2026

TOLL-8L N

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

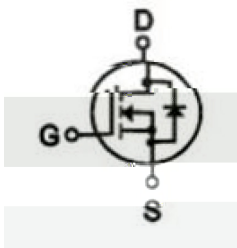
$V_{DS}(V)=120V$ $I_D=330A$

$R_{DS(ON)}@10V \leq 1.6m\Omega$ (Typ. 1.17m Ω)

HF Product.

DC/DC

Motor control and drives, Battery management, DC/DC converter.

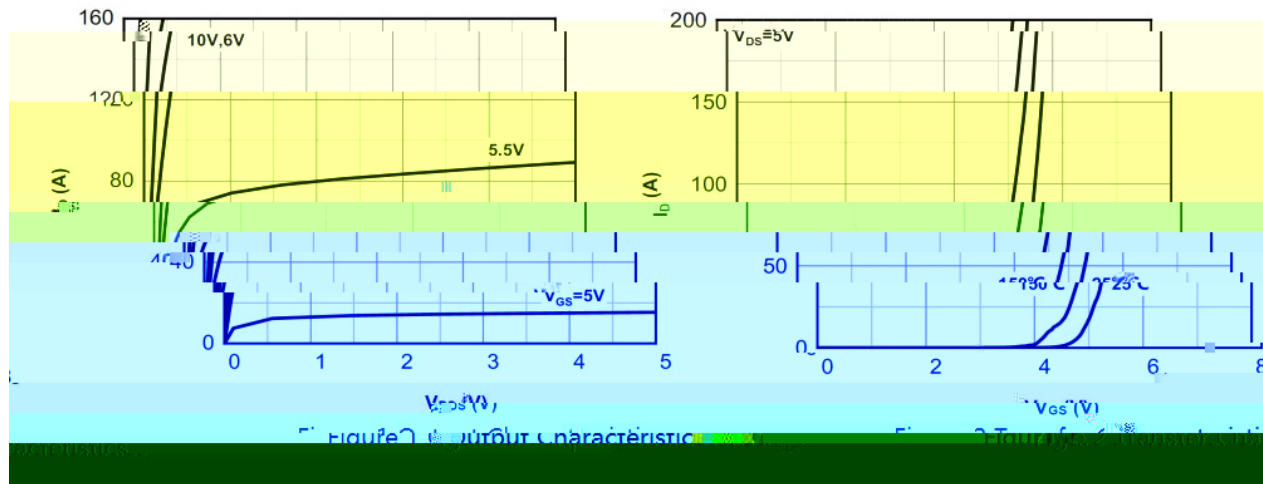
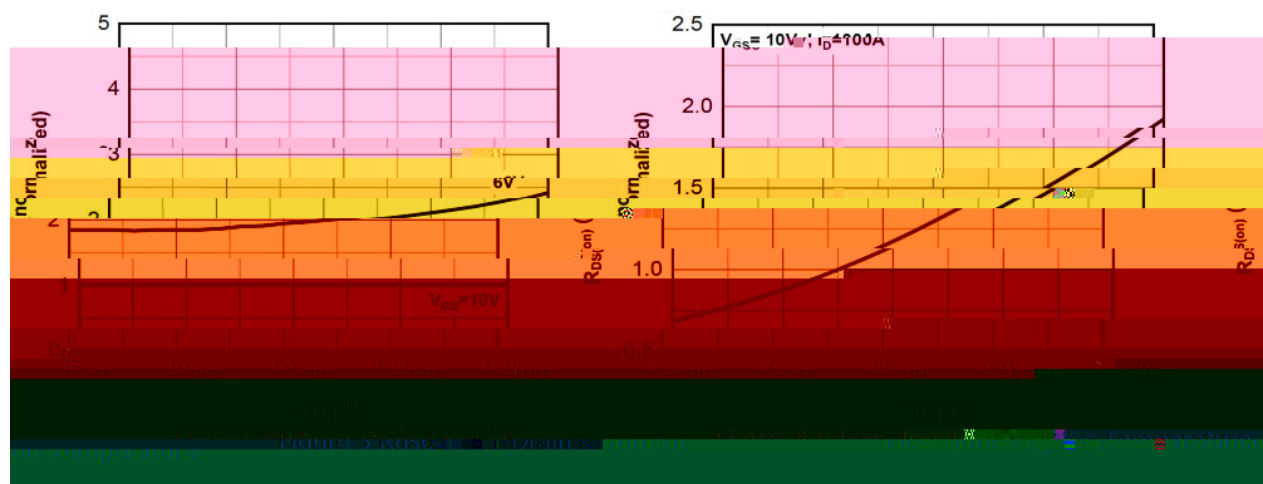
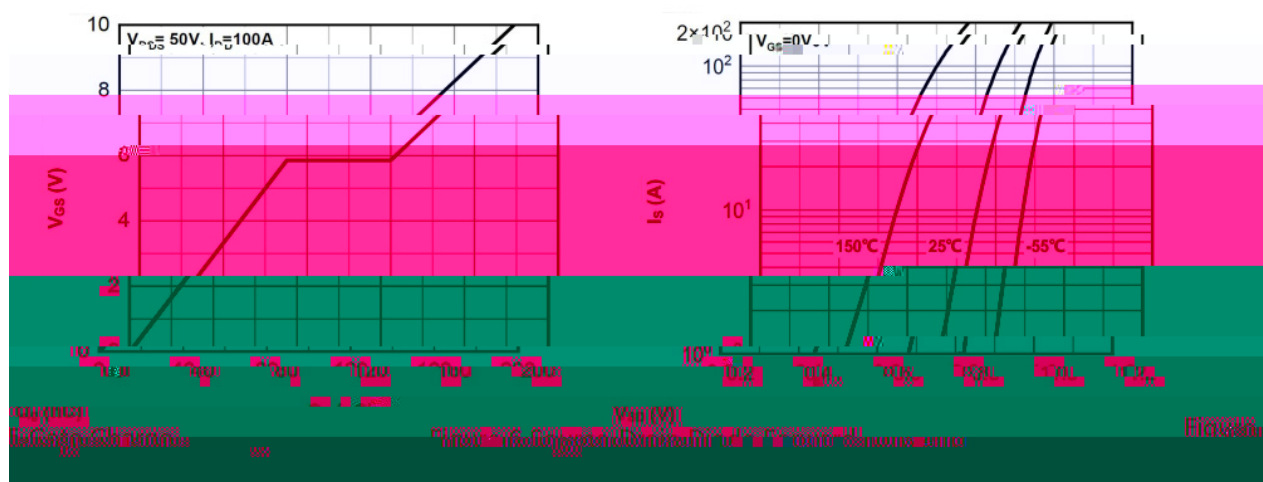


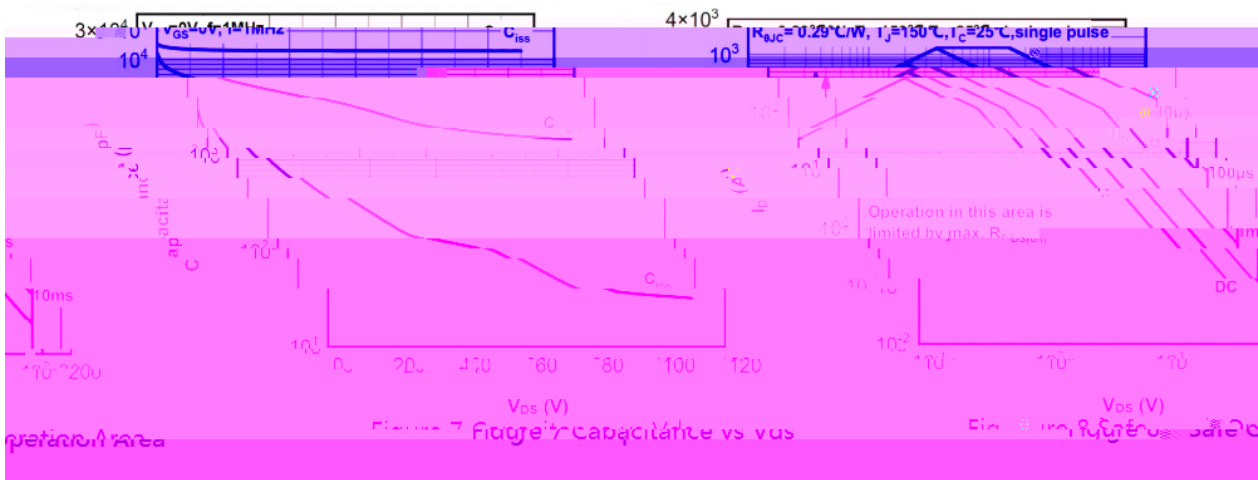
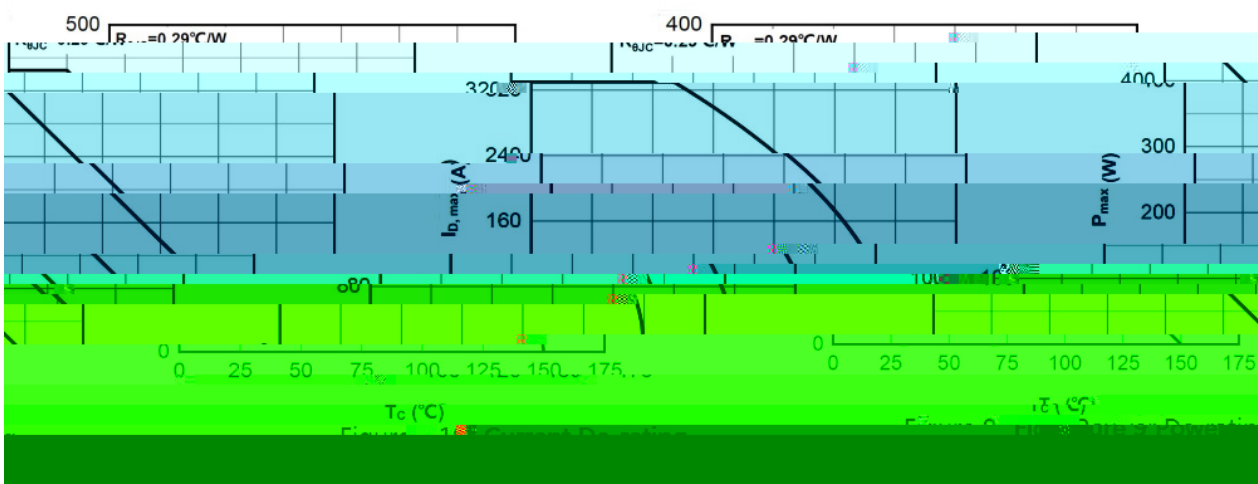
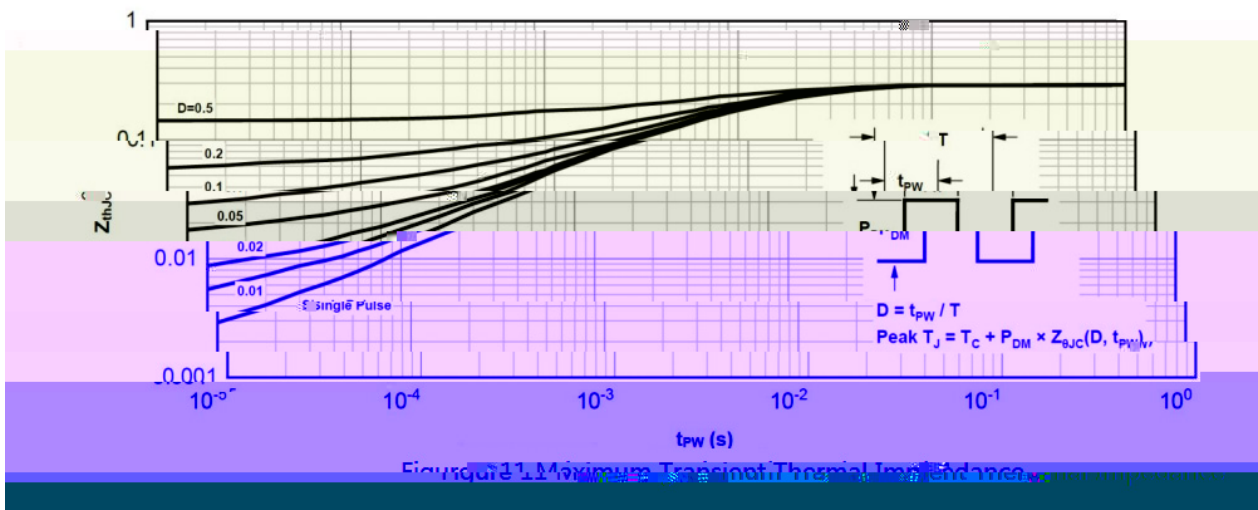
PIN1 G PIN2 3 4 5 6 7 8 S PIN9 D

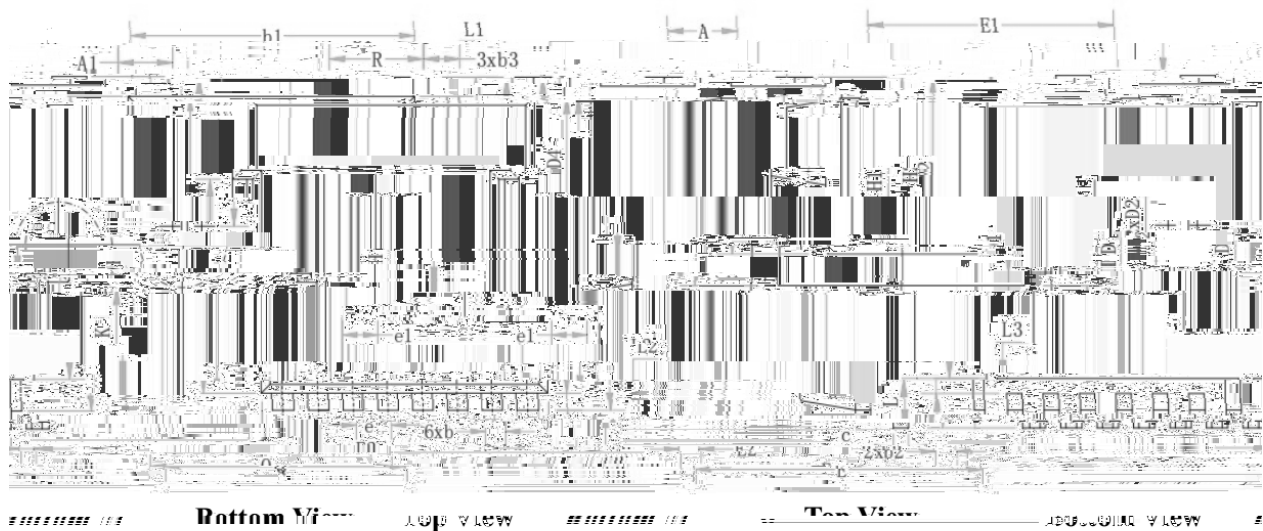
See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	120	V
Drain Current(DC)	$I_D(T_C=25^\circ\text{C})$	330	A
	$I_D(T_C=100^\circ\text{C})$	258	A
Drain Current – Pulsed	I_{DM}	1320	A
Gate-Source Voltage	V_{GS}	20	V
Power Dissipation	P_{tot}	431	W
Single Pulse Avalanche Energy	E_{AS}	2601	mJ
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - case	$R_{\theta JC}$	0.29	/W
Thermal resistance, junction - Ambient	$R_{\theta JA}$	40	

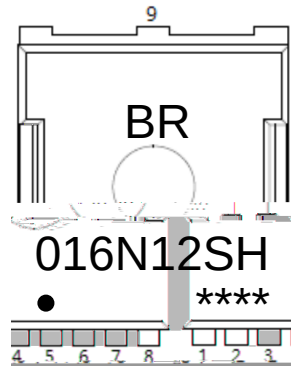
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	119	121		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=110\text{V}, V_{GS}=0\text{V}$			1	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	2.2	3.0	4.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=40\text{A}$		1.17	1.6	$\text{m}\Omega$
Diode Forward Voltage	V_{SD}	$I_S=40\text{A}, V_{GS}=0\text{V}$		0.85	1.1	V
Reverse Recovery Time	t_{rr}					V







Symbol	Min	Typ	Max	Symbol	Min	Typ	Max
A	2.25	2.30	2.35	E	0.85	0.90	0.95
A1	1.75	1.80	1.85	E1	8.00	8.10	8.2
b	0.65	0.70	0.75	E2	0.65	0.70	0.75
b1	9.75	9.80	9.85	H	11.60	11.70	11.80
h2	0.70	0.75	0.80	H1	6.95	7.00	7.05
h3	1.15	1.20	1.25	H2	3.90	3.95	4.00
h4	0.55	0.60	0.65	H3	2.10	2.15	2.20
D	10.35	10.40	10.45	L	1.55	1.60	1.65
D1	11.00	11.10	11.20	L1	0.65	0.70	0.75
D2	3.30	3.35	3.40	L2	0.50	0.55	0.60
D3	4.50	4.55	4.60	L3	0.40	0.45	0.50
D4	1.20	1.25	1.30	L4	0.30	0.35	0.40
e	1.20	1.25	1.30	L5	0.20	0.25	0.30
f	1.225	1.25	1.275	R	3.00	3.05	3.10



BR

016N12SH

Note

BR

Company Code

016N12SH

Product Type Code

****:

Lot No. Code, code change with Lot No.

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