

BRCS013N04SHTL

Rev.E May.-2026

/ Descriptions

TOLL-8L N

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

/ Features

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

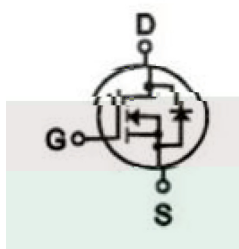
$R_{DS(ON)}@10V \leq 1.3m\Omega$ (Typ. $0.85m\Omega$)

HF Product.

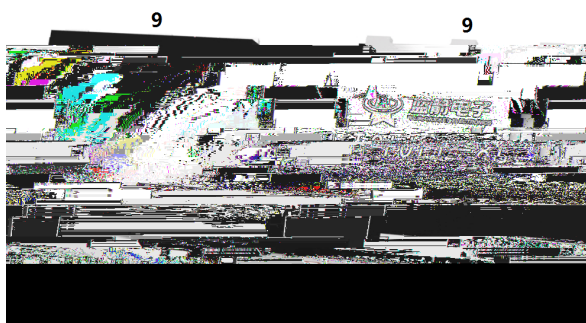
/ Applications

Motor drivers, Battery management, DC - DC Converter.

/ Equivalent Circuit



/ Pinning



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

/ Marking

See Marking Instructions.

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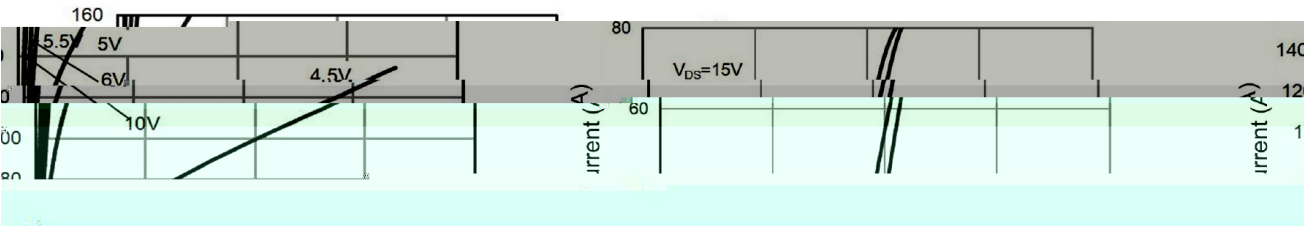
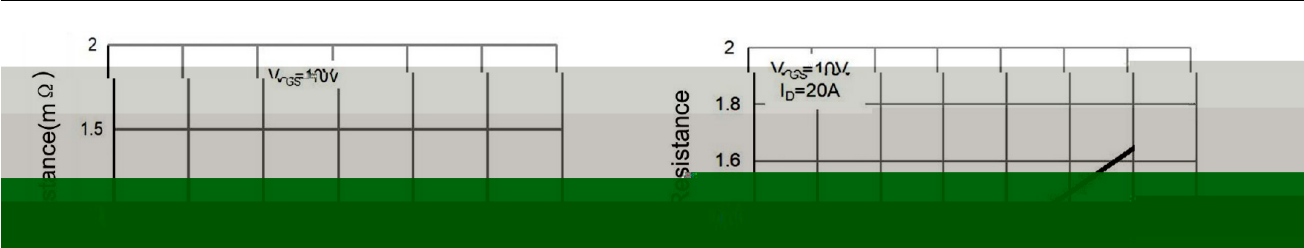
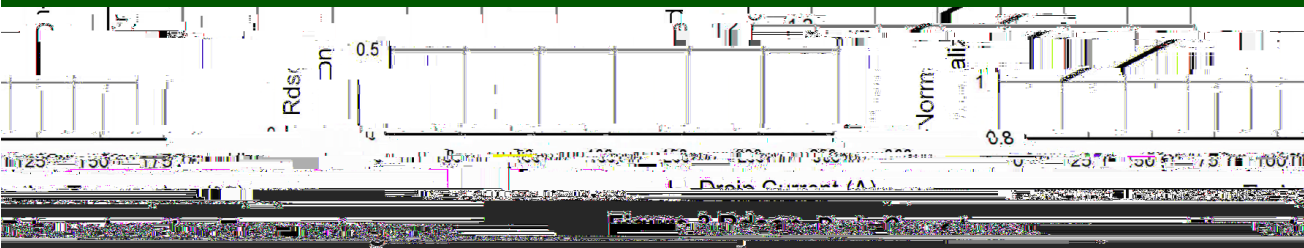
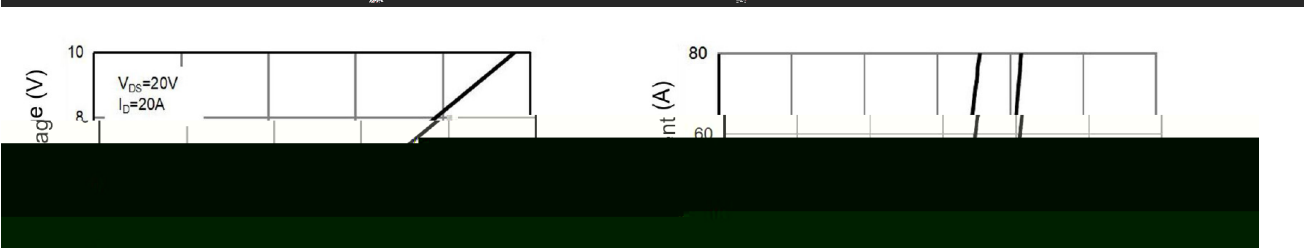
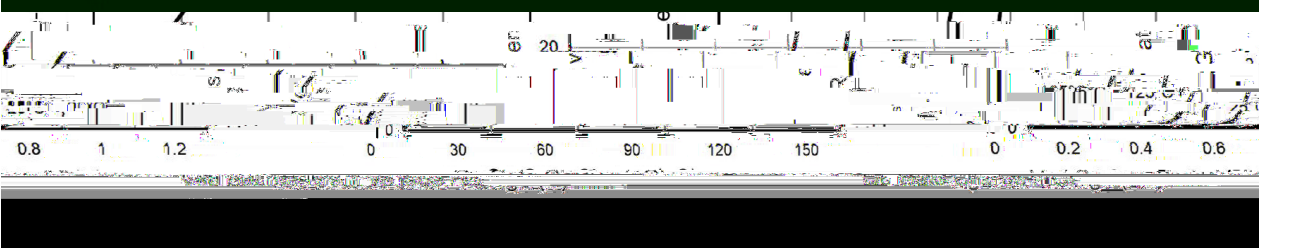
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current - Continuous	I_D	395	A
Drain Current - Continuous	$I_D(T_c=100^\circ\text{C})$	250	A
Drain Current – Pulsed	I_{DM}	1580	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	P_{tot}	272	W
Single Pulse Avalanche Energy	E_{AS}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



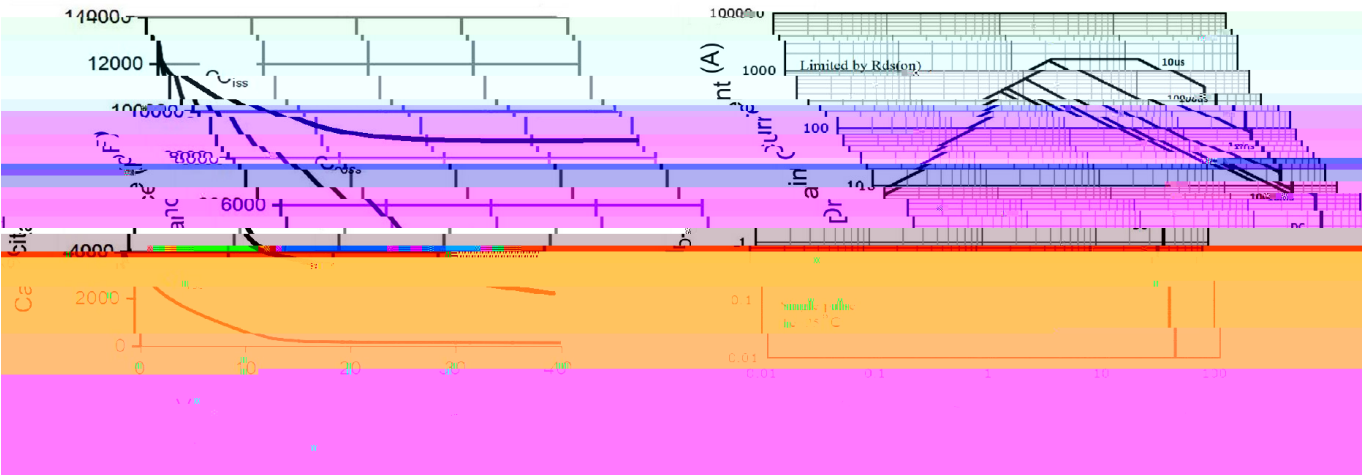
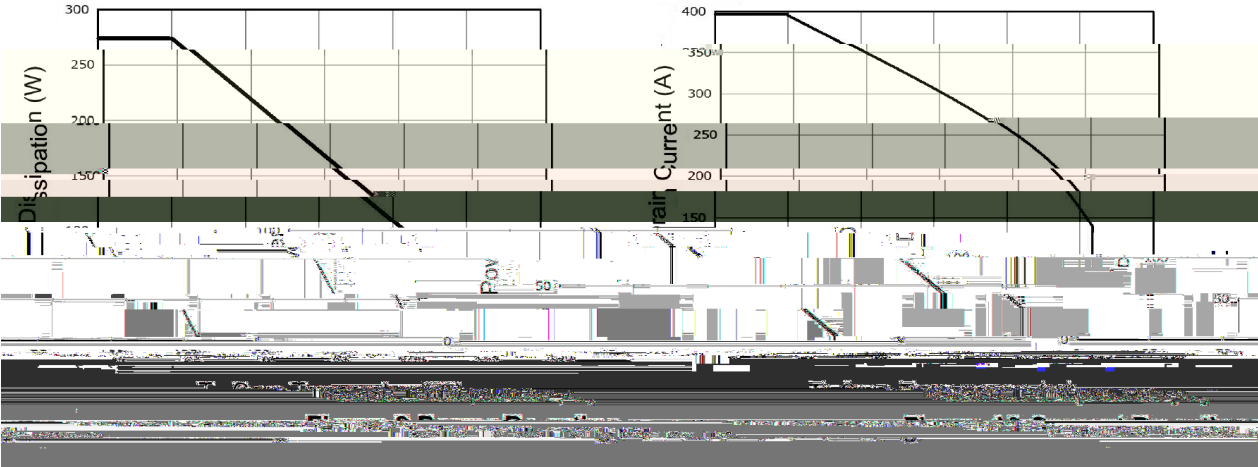
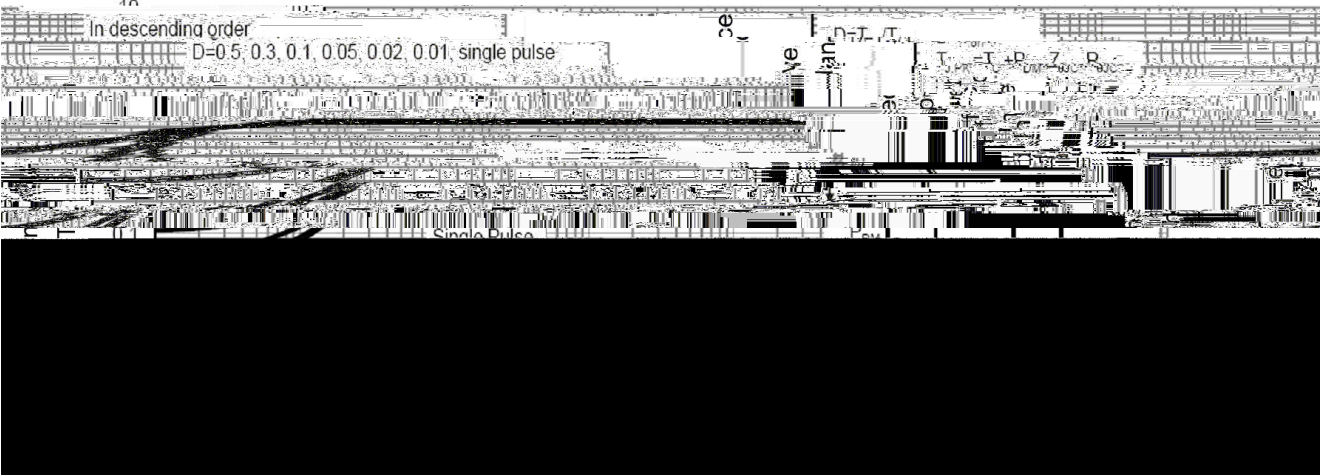
/ Electrical Characteristics(Ta=25)

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

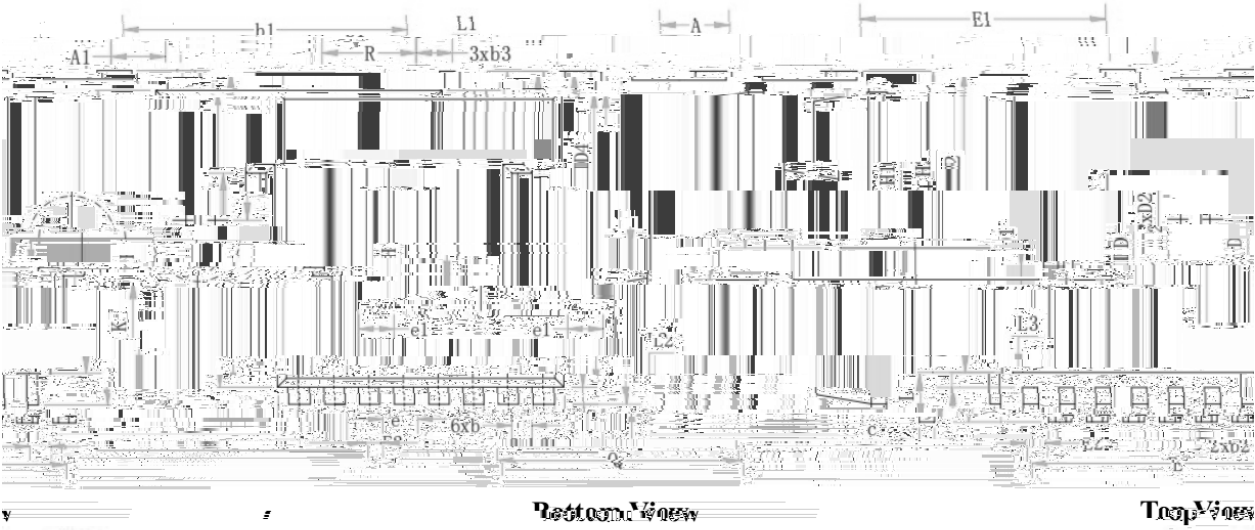
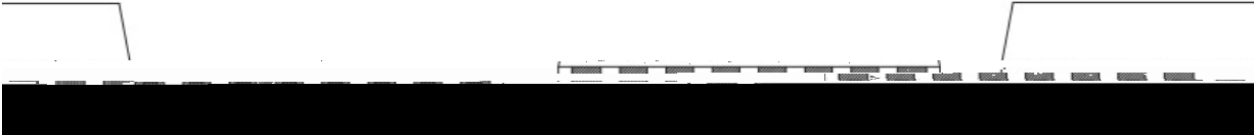
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

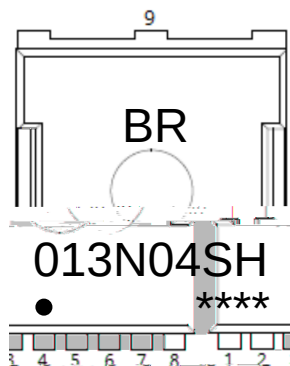


/ Package Dimensions



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	8.2
b	0.65	0.70	0.75	E2	0.65	0.70	0.7
b1	9.75	9.80	9.85	H1	11.60	11.70	1
b2	0.70	0.75	0.80	H2	6.95	7.00	7.05
b3	1.15	1.20	1.25	H3	3.90	3.95	4.00
b4	0.55	0.60	0.65	H4	2.10	2.15	2.20
D	10.35	10.40	10.45	L	1.55	1.65	
D1	11.00	11.10	11.20	L1	0.65	0.70	
D2	3.25	3.30	3.35	L2	0.50	0.55	
D4	4.50	4.55	4.60	L3	0.40	0.45	
e	1.20	1.25	1.30	L4	0.35	0.40	
e1	1.25	1.30	1.35	L5	0.30	0.35	
e2	1.25	1.30	1.35	L6	0.30	0.35	
e3	1.25	1.30	1.35	L7	0.30	0.35	
e4	1.25	1.30	1.35	L8	0.30	0.35	
e5	1.25	1.30	1.35	L9	0.30	0.35	
e6	1.25	1.30	1.35	L10	0.30	0.35	
e7	1.25	1.30	1.35	L11	0.30	0.35	
e8	1.25	1.30	1.35	L12	0.30	0.35	
e9	1.25	1.30	1.35	L13	0.30	0.35	
e10	1.25	1.30	1.35	L14	0.30	0.35	
e11	1.25	1.30	1.35	L15	0.30	0.35	
e12	1.25	1.30	1.35	L16	0.30	0.35	
e13	1.25	1.30	1.35	L17	0.30	0.35	
e14	1.25	1.30	1.35	L18	0.30	0.35	
e15	1.25	1.30	1.35	L19	0.30	0.35	
e16	1.25	1.30	1.35	L20	0.30	0.35	
e17	1.25	1.30	1.35	L21	0.30	0.35	
e18	1.25	1.30	1.35	L22	0.30	0.35	
e19	1.25	1.30	1.35	L23	0.30	0.35	
e20	1.25	1.30	1.35	L24	0.30	0.35	
e21	1.25	1.30	1.35	L25	0.30	0.35	
e22	1.25	1.30	1.35	L26	0.30	0.35	
e23	1.25	1.30	1.35	L27	0.30	0.35	
e24	1.25	1.30	1.35	L28	0.30	0.35	
e25	1.25	1.30	1.35	L29	0.30	0.35	
e26	1.25	1.30	1.35	L30	0.30	0.35	
e27	1.25	1.30	1.35	L31	0.30	0.35	
e28	1.25	1.30	1.35	L32	0.30	0.35	
e29	1.25	1.30	1.35	L33	0.30	0.35	
e30	1.25	1.30	1.35	L34	0.30	0.35	
e31	1.25	1.30	1.35	L35	0.30	0.35	
e32	1.25	1.30	1.35	L36	0.30	0.35	
e33	1.25	1.30	1.35	L37	0.30	0.35	
e34	1.25	1.30	1.35	L38	0.30	0.35	
e35	1.25	1.30	1.35	L39	0.30	0.35	
e36	1.25	1.30	1.35	L40	0.30	0.35	
e37	1.25	1.30	1.35	L41	0.30	0.35	
e38	1.25	1.30	1.35	L42	0.30	0.35	
e39	1.25	1.30	1.35	L43	0.30	0.35	
e40	1.25	1.30	1.35	L44	0.30	0.35	
e41	1.25	1.30	1.35	L45	0.30	0.35	
e42	1.25	1.30	1.35	L46	0.30	0.35	
e43	1.25	1.30	1.35	L47	0.30	0.35	
e44	1.25	1.30	1.35	L48	0.30	0.35	
e45	1.25	1.30	1.35	L49	0.30	0.35	
e46	1.25	1.30	1.35	L50	0.30	0.35	
e47	1.25	1.30	1.35	L51	0.30	0.35	
e48	1.25	1.30	1.35	L52	0.30	0.35	
e49	1.25	1.30	1.35	L53	0.30	0.35	
e50	1.25	1.30	1.35	L54	0.30	0.35	
e51	1.25	1.30	1.35	L55	0.30	0.35	
e52	1.25	1.30	1.35	L56	0.30	0.35	
e53	1.25	1.30	1.35	L57	0.30	0.35	
e54	1.25	1.30	1.35	L58	0.30	0.35	
e55	1.25	1.30	1.35	L59	0.30	0.35	
e56	1.25	1.30	1.35	L60	0.30	0.35	
e57	1.25	1.30	1.35	L61	0.30	0.35	
e58	1.25	1.30	1.35	L62	0.30	0.35	
e59	1.25	1.30	1.35	L63	0.30	0.35	
e60	1.25	1.30	1.35	L64	0.30	0.35	
e61	1.25	1.30	1.35	L65	0.30	0.35	
e62	1.25	1.30	1.35	L66	0.30	0.35	
e63	1.25	1.30	1.35	L67	0.30	0.35	
e64	1.25	1.30	1.35	L68	0.30	0.35	
e65	1.25	1.30	1.35	L69	0.30	0.35	
e66	1.25	1.30	1.35	L70	0.30	0.35	
e67	1.25	1.30	1.35	L71	0.30	0.35	
e68	1.25	1.30	1.35	L72	0.30	0.35	
e69	1.25	1.30	1.35	L73	0.30	0.35	
e70	1.25	1.30	1.35	L74	0.30	0.35	
e71	1.25	1.30	1.35	L75	0.30	0.35	
e72	1.25	1.30	1.35	L76	0.30	0.35	
e73	1.25	1.30	1.35	L77	0.30	0.35	
e74	1.25	1.30	1.35	L78	0.30	0.35	
e75	1.25	1.30	1.35	L79	0.30	0.35	
e76	1.25	1.30	1.35	L80	0.30	0.35	
e77	1.25	1.30	1.35	L81	0.30	0.35	
e78	1.25	1.30	1.35	L82	0.30	0.35	
e79	1.25	1.30	1.35	L83	0.30	0.35	
e80	1.25	1.30	1.35	L84	0.30	0.35	
e81	1.25	1.30	1.35	L85	0.30	0.35	
e82	1.25	1.30	1.35	L86	0.30	0.35	
e83	1.25	1.30	1.35	L87	0.30	0.35	
e84	1.25	1.30	1.35	L88	0.30	0.35	
e85	1.25	1.30	1.35	L89	0.30	0.35	
e86	1.25	1.30	1.35	L90	0.30	0.35	
e87	1.25	1.30	1.35	L91	0.30	0.35	
e88	1.25	1.30	1.35	L92	0.30	0.35	
e89	1.25	1.30	1.35	L93	0.30	0.35	
e90	1.25	1.30	1.35	L94	0.30	0.35	
e91	1.25	1.30	1.35	L95	0.30	0.35	
e92	1.25	1.30	1.35	L96	0.30	0.35	
e93	1.25	1.30	1.35	L97	0.30	0.35	
e94	1.25	1.30	1.35	L98	0.30	0.35	
e95	1.25	1.30	1.35	L99	0.30	0.35	
e96	1.25	1.30	1.35	L100	0.30	0.35	

/ Marking Instructions



BR

013N04SH

Note

BR

Company Code

013N04SH

Product Type Code

****:

Lot No. Code, code change with Lot No.

