5 é / Descriptions

TOLL-8L / x N ?ú 3 « | • ’ ož
N-Channel MOSFET in a TOLL-8L Plastic Package .

¤ ª / Features

V_{DS}(V)=100V I_D=330A
$R_{DS(ON)}$@10V ”1.5m Ÿ(Typ.1.2m Ÿ)
—)í D } ÄHF Product.

Ð ÷ / Applications

DC/DC ô E ˜o• › • ¼o• Ñ Ü ož
DC/DC converter,Power switch,Motor drives.

Ã W] Ô · / Equivalent Circuit

• Û - æ / Pinning

PIN1 ÖG PIN2 Ã3 Ã4 Ã5 Ã6 Ã7 Ã8 ÖS PIN9 ÖD

, M V / Marking

• - ~ ª ¢ož
See Marking Instructions.

Ã a ? d / Absolute Maximum Ratings(T C=25 ;)

@ ƒ Parameter		… Z Symbol	ƒ › Rating	% y Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current - Continuous		I_D	330	A
Drain Current – Pulsed		I_{DM}	1320	A
Gate-Source Voltage		V_{GS}	f 20	V
Power Dissipation		P_{tot}	431	W
Single Pulse Avalanche Energy(V_{DS}=75V,V_{GS}=10V,L=0.3mH)		E_{AS}	540	mJ
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	-
Thermal resistance, junction - ambient	Steady-State	R JA	40	- =
Thermal resistance, junction - case	Steady-State	R JC	0.29	

Ô4ì × ? d / Electrical Characteristics(Ta=25 ;)

@ ƒ Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	100			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V, V_{GS}=0V			1	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			f 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	2.2	3.0	3.8	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=100A		1.2	1.5	m S
Diode Forward Voltage	V_{SD}	I_S=100A, V_{GS}=0V		0.85	1.1	V
Gate Resistance	R_g	f=1MHz		1		S
Input Capacitance	C_{iss}	V_{DS}=50V V_{GS}=0V f=1.0MHz		15800		pF
Output Capacitance	C_{oss}			1930		
Reverse Transfer Capacitance	C_{rss}			75		
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=50V I_D=100A		260		nC
Gate Source Charge	Q_{gs}			75		
Gate Drain Charge	Q_{gd}			76		

@ *f* Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Turn-On Delay Time	$t_{d(on)}$			81		
Turn-On Rise Time	t_r	V_{GS}=10V V_{DS}=50V R_G=6 ¡ I_D=100A		178		ns

Ô ? d • Ž ¢ / Electrical Characteristic Curve

Ô ? d • Ž ¢ / Electrical Characteristic Curve

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Ø ¤ =) ¢ / Package Dimensions

9_SHU	*OSKTYOUTY /T 3OR			9_SHU	*OSKTYOUTY /T 3OR		
	3/4	453	3'>		3/4	453	3'>
'				H			
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ROSKZKXY

š WD t … • Ž ¢ (x /) / : K S V K X G Z [X K 6 X U L O R K L U X / 8 8 K L R U] 9 U R J K X O T M 6

ª ¢ y

1o• Ä ½ “ † 150 ½180 - k ž • 60 ½90sec;

2o• Q › “ † 245 r 5 - k ž • 4 Ò 5 r 0.5sec;

3o•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

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

2.Peak Temp.:245 r 5 - , Duration:5 r 0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 260 r 5 - ž • y 10 r 1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x /~ .RÊEIA … # ü : K ” • ÷ C Õ < g Î Å V H “ @ ” y … v v ø ™ c L à