TN10H08DNPA

N-Channel Enhancement Mode Power MOSFET

Product Summary

- V_{DS}= 100V,I_D= 8A
- $R_{DS(on)}$< 120mΩ @V_{GS}= 10V
- $R_{DS(on)}$< 140mΩ @V_{GS}= 4.5V

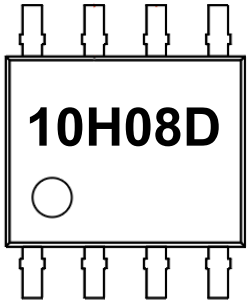
Features

- Advanced Trench Technology
- 100% Avalanche Tested
- RoHS and Reach Compliant
- Halogen and Antimony Free
- Moisture Sensitivity Level 3

Application

- Load Switch
- PWM Applications
- Power Management

Marking Code



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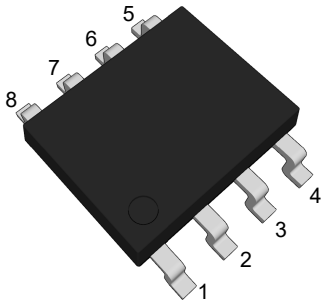
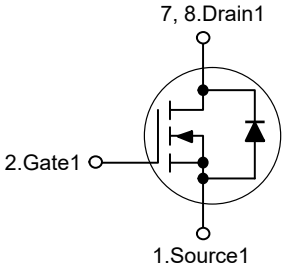


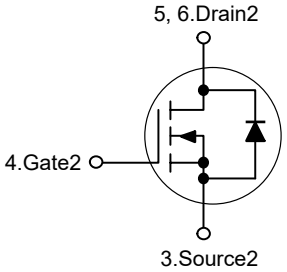
(Top View)

Pin	Description	Pin	Description
1	Source1	4	Gate2
2	Gate1	5,6	Drain2
3	Source2	7,8	Drain1

Schematic Diagram



N-Channel



N-Channel

Absolute Maximum Ratings

Ratings at 25℃ case temperature unless otherwise specified.

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	±20	V
Drain Current-Continuous	T_C = 25°C	I_D	8	A
Drain Current-Pulsed Note1		I_{DM}	40	A
Maximum Power Dissipation	T_C = 25°C	P_D	25	W
Junction Temperature		T_J	150	°C
Storage Temperature Range		T_{STG}	-55 to +150	°C

Thermal Characteristics

Thermal Resistance,Junction-to-Case	$R_{\theta JC}$	5.1	°C/W

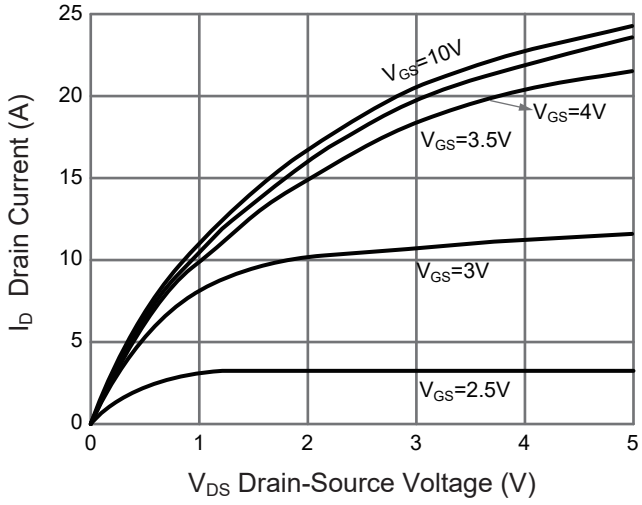
Electrical Characteristics

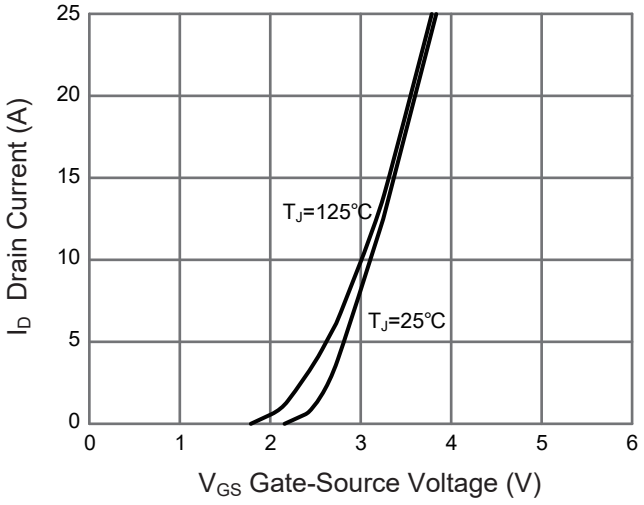
(T_J=25℃ unless otherwise specified)

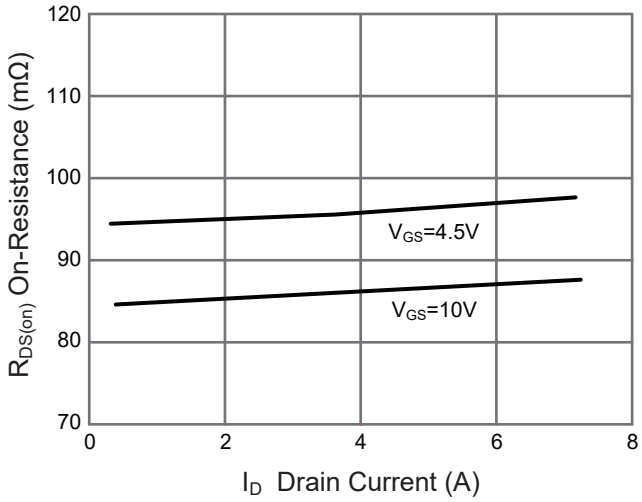
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V,I_D=250μA	100	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V,V_{GS}=0V	--	--	1	μA
Gate-Body Leakage Current	I_{GSS}	V_{GS}=±20V,V_{DS}=0V	--	--	±100	nA
Gate Threshold Voltage Note2	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=250μA	1	--	2.5	V
Drain-Source On-Resistance Note2	$R_{DS(on)}$	V_{GS}=10V,I_D=5A	--	--	120	mΩ
		V_{GS}=4.5V,I_D=3A	--	--	140	mΩ
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS}=25V,V_{GS}=0V,f=1MHz	--	847	--	pF
Output Capacitance	C_{oss}		--	40	--	pF
Reverse Transfer Capacitance	C_{rss}		--	12	--	pF
Total Gate Charge	Q_g	V_{DD}=50V, V_{GS}=10V,I_D=2A	--	20	--	nC
Gate-Source Charge	Q_{gs}		--	2.8	--	nC
Gate-Drain Charge	Q_{gd}		--	4	--	nC
Switching Characteristics						
Turn-on Delay Time	$t_{d(on)}$	V_{DS}=50V, I_D=3A, V_{GS}=10V,R_{GEN}=1.8Ω	--	6	--	nS
Turn-on Rise Time	t_r		--	7	--	nS
Turn-off Delay Time	$t_{d(off)}$		--	21	--	nS
Turn-off Fall Time	t_f		--	3	--	nS
Source-Drain Diode Characteristics						
Diode Forward Voltage	V_{SD}	V_{GS}=0V,I_S=8A	--	--	1.2	V
Diode Forward Current	I_S		--	--	8	A

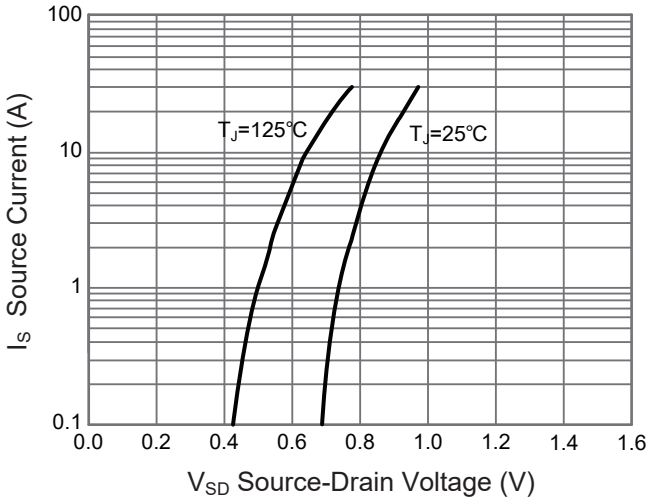
Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Pulse Test: Pulse width≤300μs, duty cycle≤0.5%.

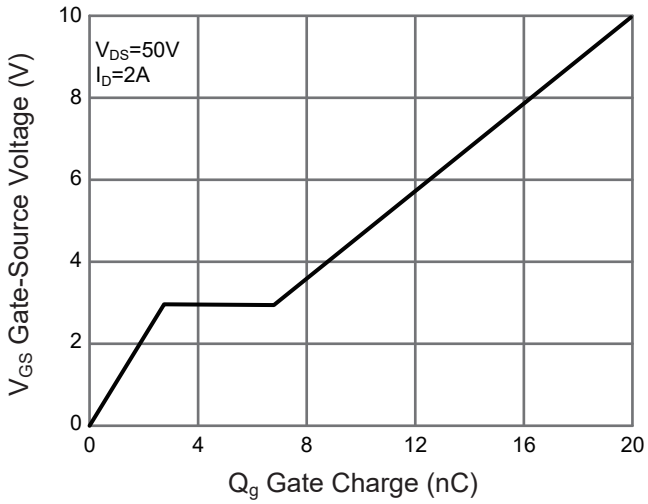
Typical Characteristic Curves

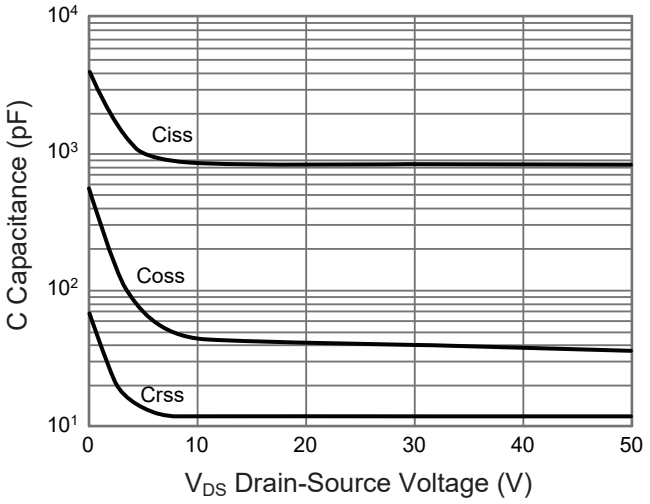


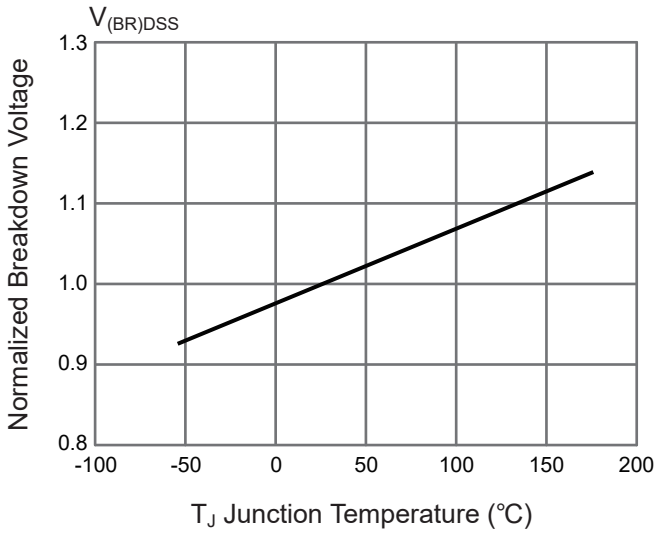


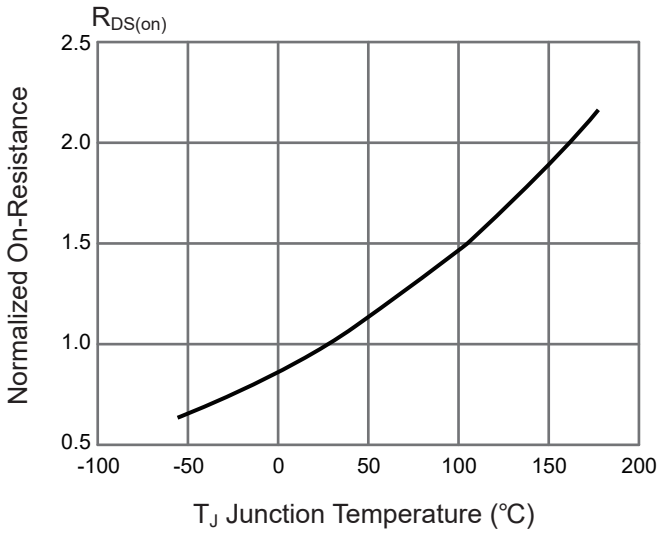


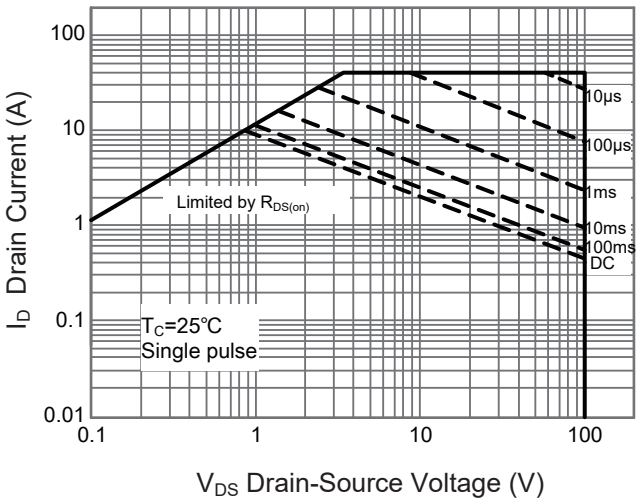












Package Outline

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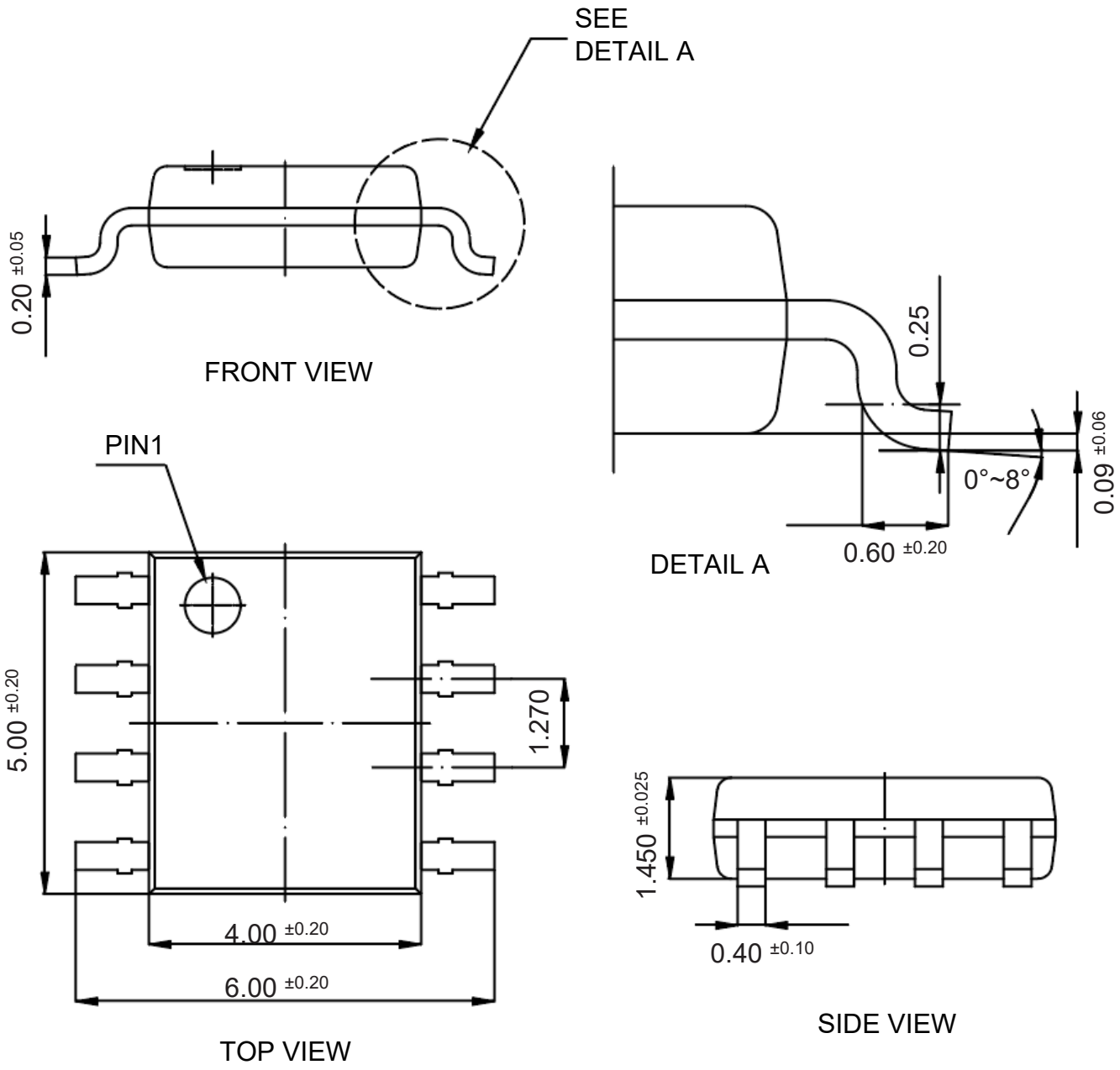
Dimensions in mm



Ordering Information

Device	Package	Shipping
TN10H08DNPA	SOP-8	4,000PCS/Reel&13inches

Contact Information

TANI website: **http://www.tanisemi.com** Email:tani@tanisemi.com

For additional information, please contact your local Sales Representative.

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