

TN9926ANPA

Dual N-Channel Enhancement Mode Power MOSFET

SOP-8

Product Summary

- $V_{DS} = 20V, I_D = 6A$
- $R_{DS(on)} < 28m\Omega @ V_{GS} = 4.5V$
- $R_{DS(on)} < 38m\Omega @ V_{GS} = 2.5V$

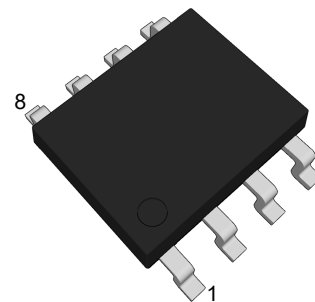
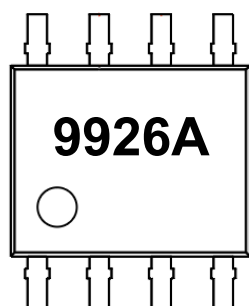
Features

- Advanced Trench Technology
- RoHS and Reach Compliant
- Halogen and Antimony Free
- Moisture Sensitivity Level 3

Application

- Power Switching Application
- Hard Switched and High Frequency Circuits
- Uninterruptible Power Supply

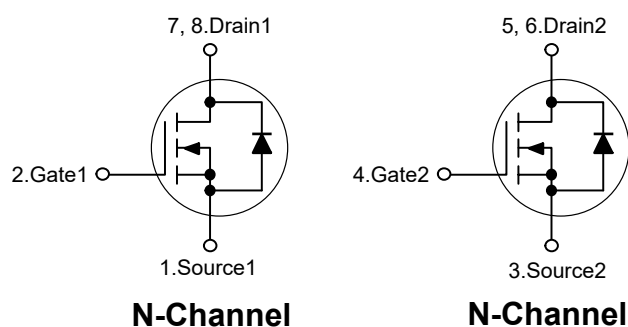
Marking Code



(Top View)

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

Schematic Diagram



Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 10	V
Drain Current-Continuous	I_D	6	A
Drain Current-Pulsed ^{Note1}	I_{DM}	25	A
Maximum Power Dissipation	P_D	1.8	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Thermal Characteristics

Thermal Resistance, Junction-to-Ambient ^{Note2}	$R_{\theta JA}$	83	°C/W
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Electrical Characteristics(T_J=25°C unless otherwise specified)

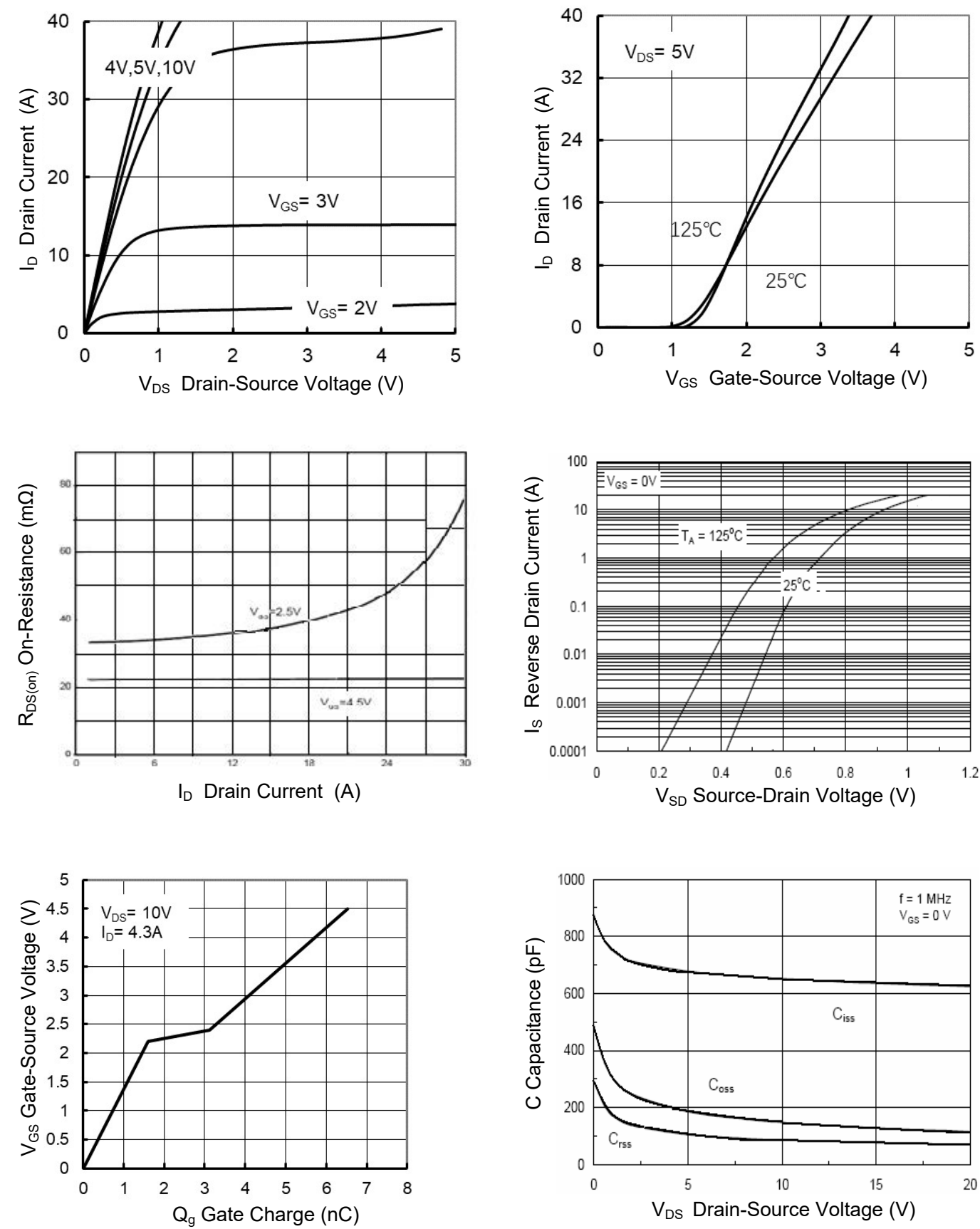
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V,I _D =250μA	20	--	--	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V,V _{GS} =0V	--	--	1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} =±10V,V _{DS} =0V	--	--	±100	nA
Gate Threshold Voltage ^{Note3}	V _{GS(th)}	V _{DS} =V _{GS} ,I _D =250μA	0.5	0.7	1.2	V
Drain-Source On-Resistance ^{Note3}	R _{DS(on)}	V _{GS} =4.5V,I _D =6A	--	24	28	mΩ
		V _{GS} =2.5V,I _D =5A	--	33	38	mΩ
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =10V,V _{GS} =0V,f=1MHz	--	640	--	pF
Output Capacitance	C _{oss}		--	140	--	pF
Reverse Transfer Capacitance	C _{rss}		--	80	--	pF
Total Gate Charge	Q _g	V _{DD} =10V, V _{GS} =4.5V,I _D =4.3A	--	6.5	--	nC
Gate-Source Charge	Q _{gs}		--	1.6	--	nC
Gate-Drain Charge	Q _{gd}		--	1.5	--	nC
Switching Characteristics						
Turn-on Delay Time	t _{d(on)}	V _{DS} =10V,V _{GS} =4.5V, I _D =1A R _{GEN} =3Ω	--	8	--	nS
Turn-on Rise Time	t _r		--	58	--	nS
Turn-off Delay Time	t _{d(off)}		--	20	--	nS
Turn-off Fall Time	t _f		--	68	--	nS
Source-Drain Diode Characteristics						
Diode Forward Voltage ^{Note3}	V _{SD}	V _{GS} =0V,I _S =6A	--	--	1.2	V
Diode Forward Current ^{Note2}	I _S		--	--	6	A

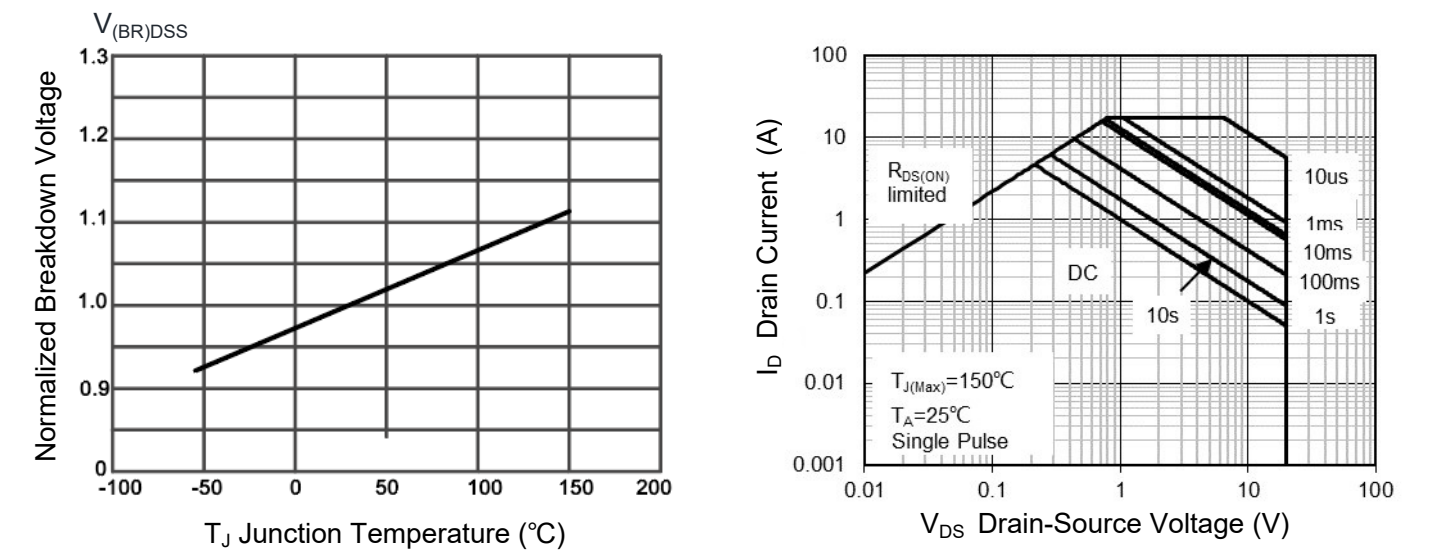
Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

2. Surface Mounted on FR4 Board, t ≤ 10 sec.

3. Pulse Test: Pulse width ≤ 300μs, duty cycle ≤ 0.5%

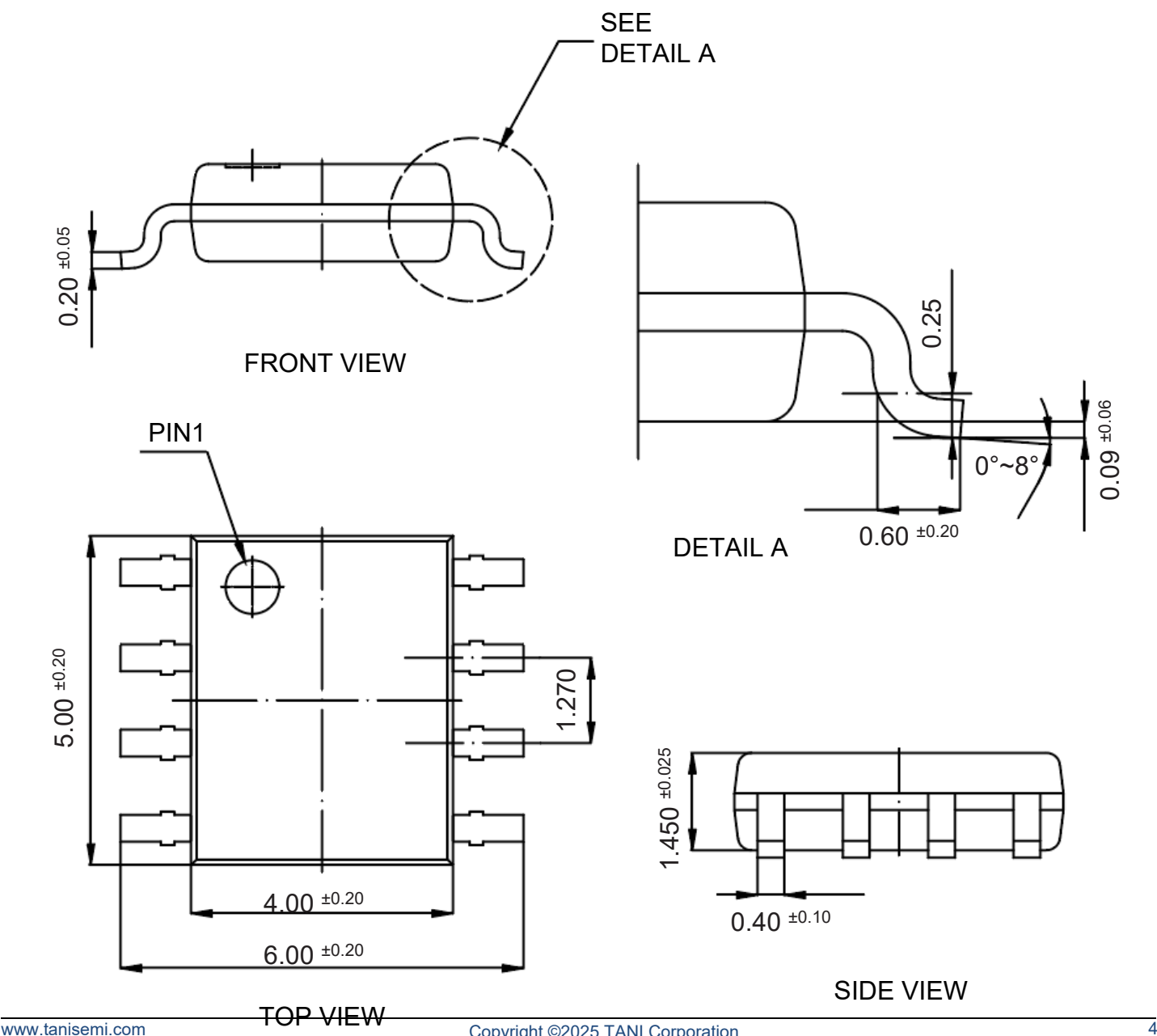
Typical Characteristic Curves





Package Outline

SOP-8 Dimensions in mm



Ordering Information

Device	Package	Shipping
TN9926ANPA	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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Product Specification Statement

The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.

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