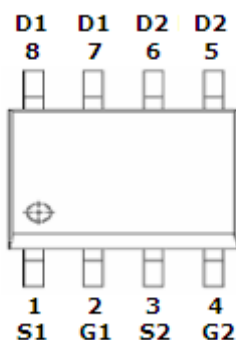


DESCRIPTION

The STN9926 is the Dual N-Channel logic enhancement mode power field effect transistors are produced using high cell density , DMOS trench technology. This high density process is especially tailored to minimize on-state resistance. These devices are particularly suited for low voltage application , notebook computer power management and other battery powered circuits where high-side switching .

PIN CONFIGURATION SOP-8



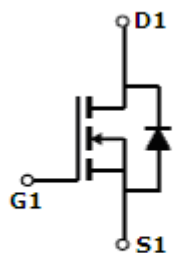
FEATURE

- 20V/5.0A, $R_{DS(ON)} = 50m\Omega$ @ $V_{GS} = 4.5V$
- 20V/4.0A, $R_{DS(ON)} = 65m\Omega$ @ $V_{GS} = 2.5V$
- 20V/2.8A, $R_{DS(ON)} = 90m\Omega$ @ $V_{GS} = 1.8V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- SOP-8 package design

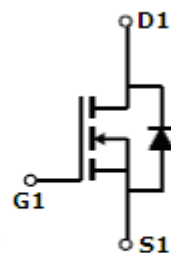
PART MARKING SOP-8



S : Subcontractor Y : Year Code
A : Process Code



N-Channel



N-Channel

ORDERING INFORMATION

Part Number	Package	Part Marking
STN9926S8RG	SOP-8	STN9926
STN9926S8TG	SOP-8	STN9926

※ Process Code : A ~ Z ; a ~ z

※ STN9926S8RG S8 : SOP-8 ; R : Tape Reel ; G : Pb – Free

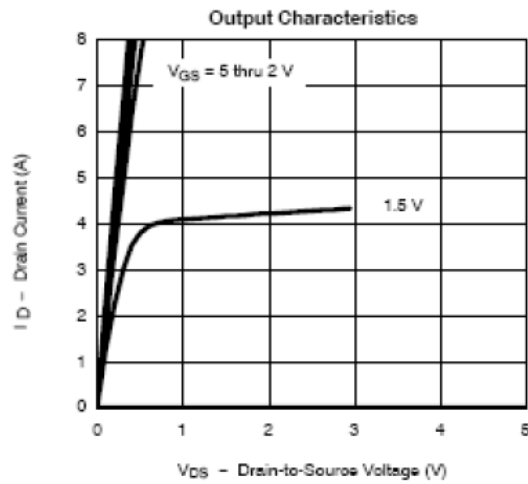
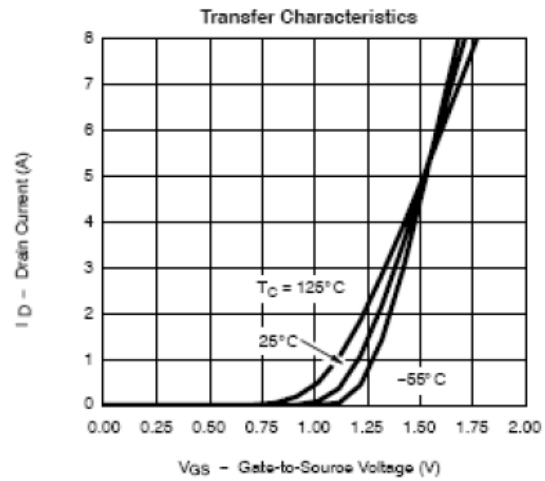
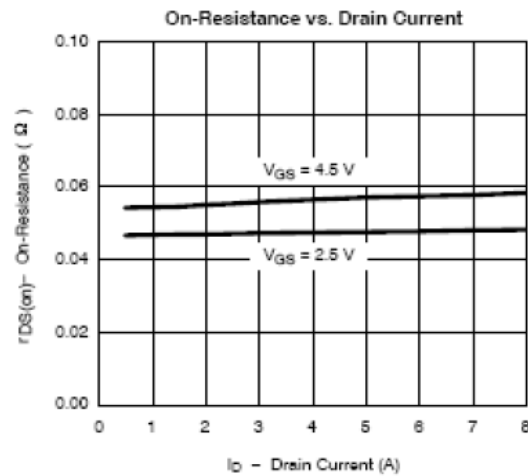
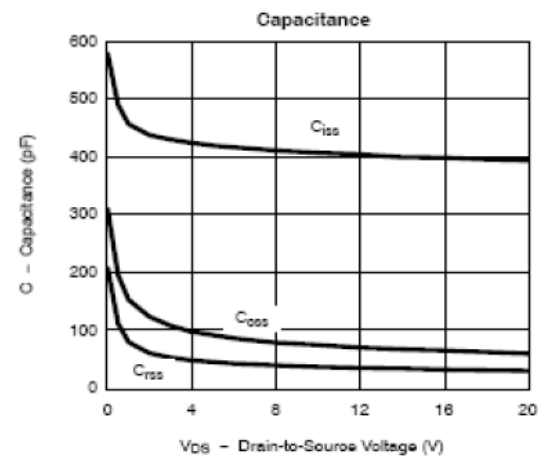
※ STN9926S8TG S8 : SOP-8 ; T : Tube ; G : Pb – Free

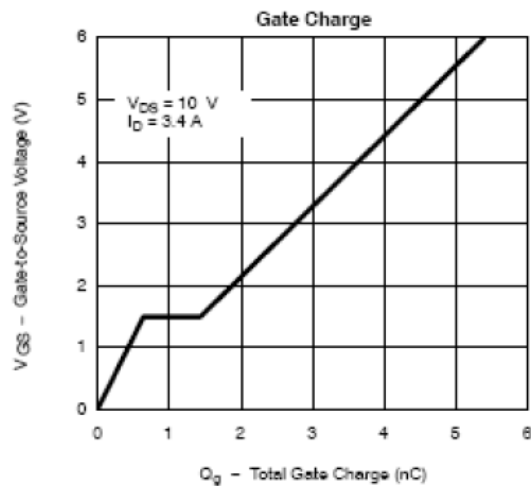
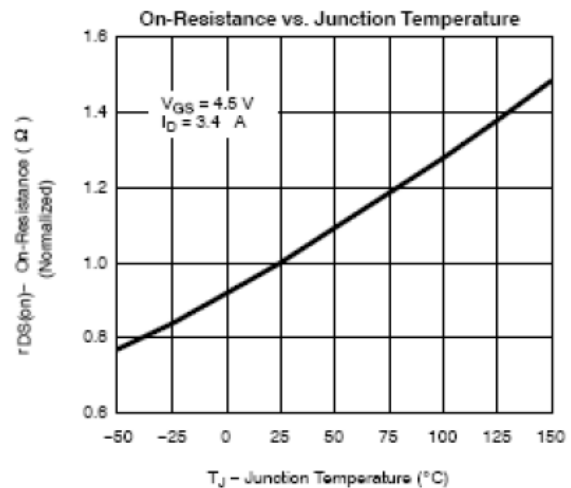
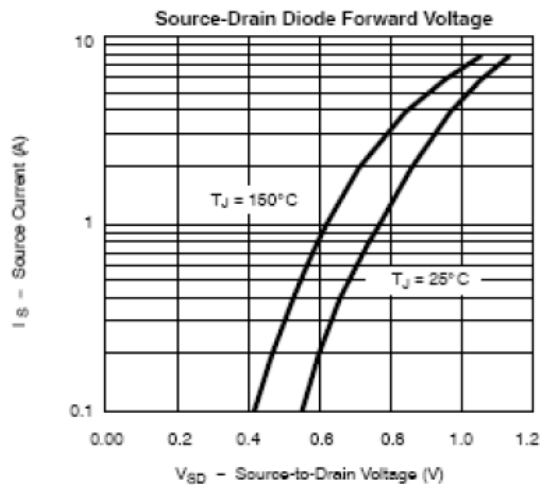
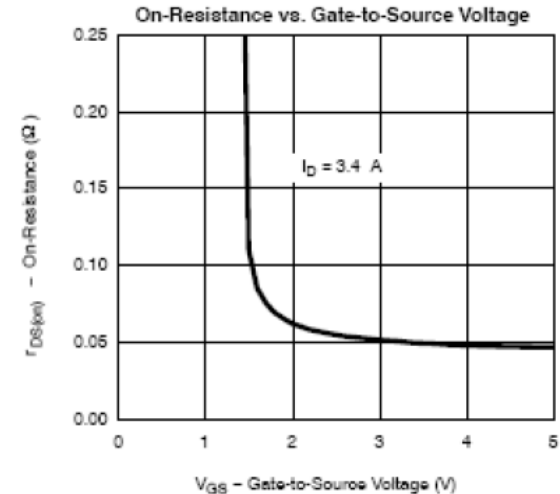
ABSOLUTE MAXIMUM RATINGS (Ta = 25°C Unless otherwise noted)

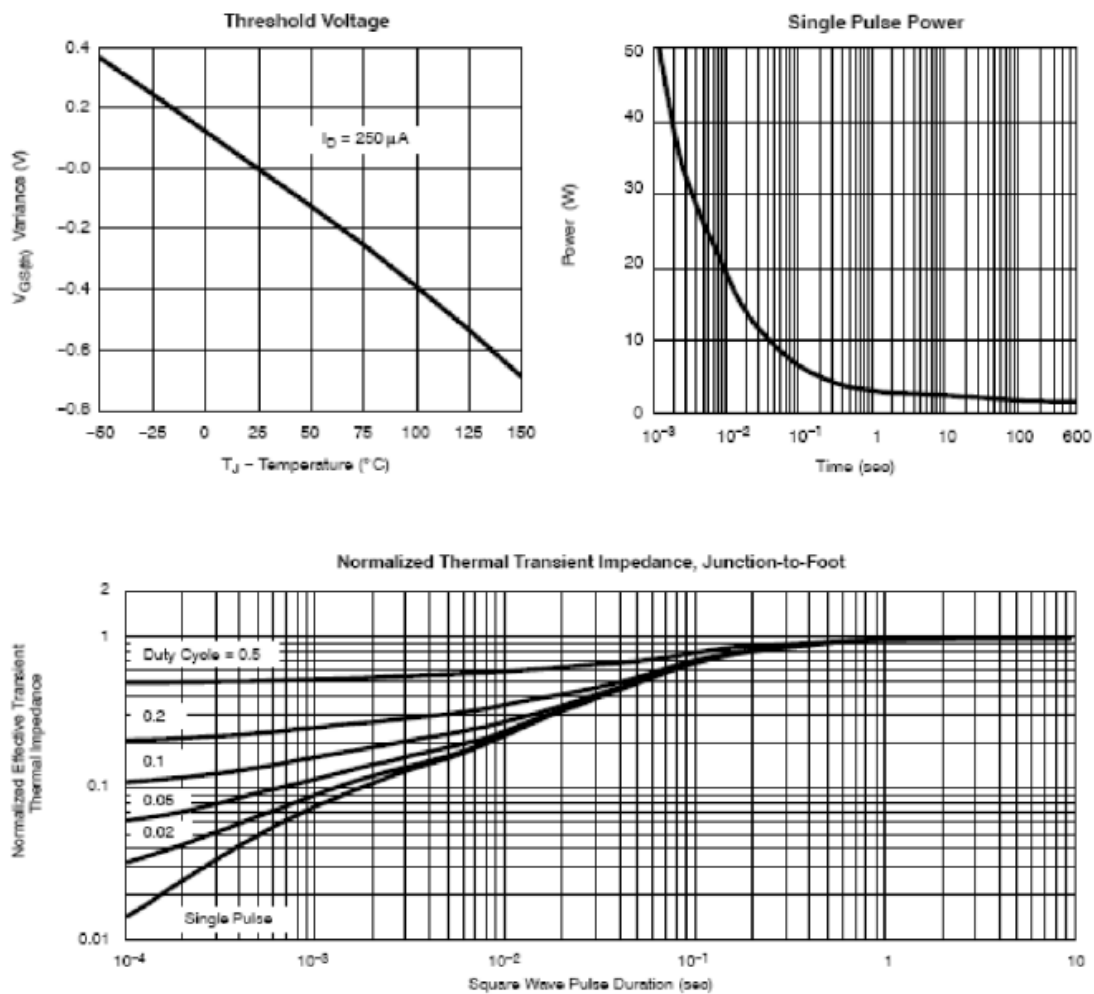
Parameter		Symbol	Typical	Unit
Drain-Source Voltage		V _{DSS}	20	V
Gate-Source Voltage		V _{GSS}	±12	V
Continuous Drain Current (T _J =150°C)	T _A =25°C T _A =70°C	I _D	5.0 4.0	A
Pulsed Drain Current		I _{DM}	30	A
Continuous Source Current (Diode Conduction)		I _S	1.6	A
Power Dissipation	T _A =25°C T _A =70°C	P _D	2.8 1.8	W
Operation Junction Temperature		T _J	-55/150	°C
Storage Temperature Range		T _{STG}	-55/150	°C
Thermal Resistance-Junction to Ambient		R _{θJA}	105	°C/W

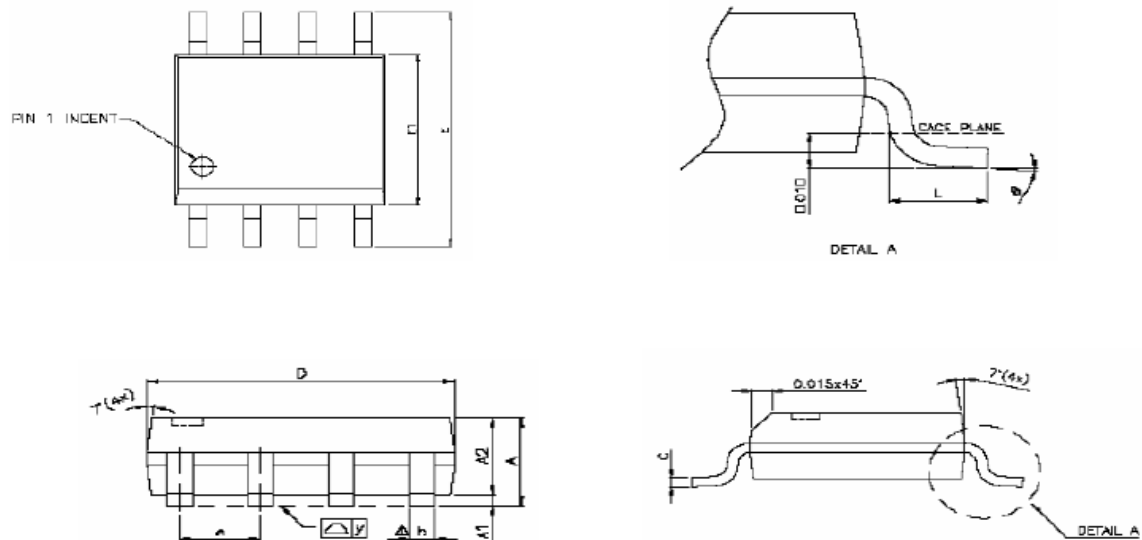
ELECTRICAL CHARACTERISTICS (Ta = 25°C Unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V,I _D =250uA	20			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} ,I _D =250 uA	0.4		1.0	V
Gate Leakage Current	I _{GSS}	V _{DS} =0V,V _{GS} =±12V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS} T _J =55℃	V _{DS} =20V,V _{GS} =0V			1	uA
		V _{DS} =20V,V _{GS} =0V			5	
On-State Drain Current	I _{D(on)}	V _{DS} ≤5V,V _{GS} =4.5V	6			A
Drain-source On-Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =5.0A V _{GS} =2.5V, I _D =4.0A V _{GS} =1.8V,I _D =2.8A		0.004 0.055 0.075	0.050 0.065 0.090	Ω
Forward Tran Conductance	g _{fs}	V _{DS} =5.0V,I _D =3.6A		10		S
Diode Forward Voltage	V _{SD}	I _S =1.6A,V _{GS} =0V		0.8	1.2	V
Dynamic						
Total Gate Charge	Q _g	V _{DS} =6.0V,V _{GS} =4.5V I _D ≡2.8A		4.8	8.0	nC
Gate-Source Charge	Q _{gs}			1.0		
Gate-Drain Charge	Q _{gd}			1.0		
Input Capacitance	C _{iss}	V _D S=6.0V,V _G S=0V f=1MHz		485		pF
Output Capacitance	C _{oss}			85		
Reverse TransferCapacitance	C _{rss}			40		
Turn-On Time	t _{d(on)} tr	V _{DD} =15V,R _L =15Ω I _D =1A,V _{GEN} =10V R _G =6Ω		12	20	nS
				10	20	
Turn-Off Time	t _{d(off)} tf			30	36	
				15	17	

TYPICAL CHARACTERISTICS (25°C Unless Note)


TYPICAL CHARACTERISTICS (25°C Unless Note)


TYPICAL CHARACTERISTICS (25°C Unless Note)


SOP-8 PACKAGE OUTLINE


SYMBOLS	DIMENSIONS IN MILLIMETERS			DIMENSIONS IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.47	1.60	1.73	0.058	0.063	0.068
A1	0.10	—	0.25	0.004	—	0.010
A2	—	1.45	—	—	0.057	—
b	0.33	0.41	0.51	0.013	0.016	0.020
c	0.19	0.20	0.25	0.0075	0.008	0.0098
D	4.80	4.85	4.95	0.189	0.191	0.195
E	5.80	6.00	6.20	0.228	0.236	0.244
E1	3.80	3.90	4.00	0.150	0.154	0.157
e	—	1.27	—	—	0.050	—
L	0.38	0.71	1.27	0.015	0.028	0.050
Δy	—	—	0.076	—	—	0.003
ϕ	0°	—	8°	0°	—	8°