SPP4925
P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP4925 is the Dual P-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 .

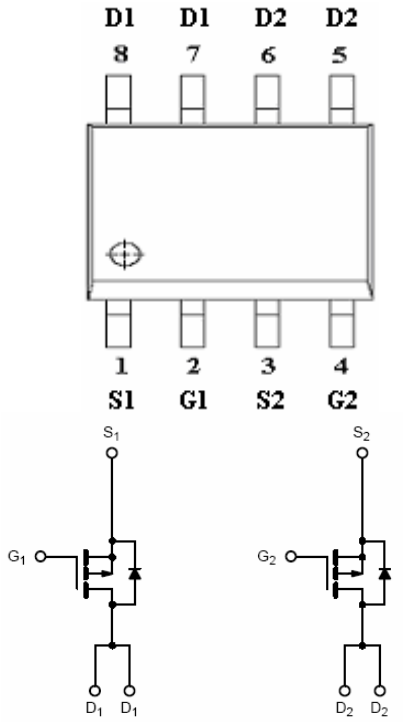
APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

FEATURES

- -30V/-7.2A,$R_{DS(ON)}$= 25mΩ@V_{GS}=- 10V
- -30V/-5.6A,$R_{DS(ON)}$= 40mΩ@V_{GS}=-4.5V
- Super high density cell design for extremely low RDS (ON)
- Exceptional on-resistance and maximum DC current capability
- SOP – 8P package design

PIN CONFIGURATION(SOP – 8P)



PART MARKING



A : Lot Code
B : Date Code

SPP4925
P-Channel Enhancement Mode MOSFET

PIN DESCRIPTION

Pin	Symbol	Description
1	S1	Source 1
2	G1	Gate 1
3	S2	Source 2
4	G2	Gate 2
5	D2	Drain 2
6	D2	Drain 2
7	D1	Drain 1
8	D1	Drain 1

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP4925S8RG	SOP- 8P	SPP4925
SPP4925S8TG	SOP- 8P	SPP4925

※ SPP4925S8RG : 13" Tape Reel ; Pb – Free
※ SPP4925S8TG : Tube ; Pb – Free

ABSOULTE MAXIMUM RATINGS

(T_A=25℃ Unless otherwise noted)

Parameter		Symbol	Typical	Unit
Drain-Source Voltage		V_{DSS}	-30	V
Gate –Source Voltage		V_{GSS}	±20	V
Continuous Drain Current(T_J=150℃)	T_A=25℃	I_D	-7.2	A
	T_A=70℃		-5.6	
Pulsed Drain Current		I_{DM}	-20	A
Continuous Source Current(Diode Conduction)		I_S	-2.3	A
Power Dissipation	T_A=25℃	P_D	2.8	W
	T_A=70℃		1.8	
Operating Junction Temperature		T_J	-55/150	℃
Storage Temperature Range		T_{STG}	-55/150	℃
Thermal Resistance-Junction to Ambient		$R_{\theta JA}$	70	℃/W

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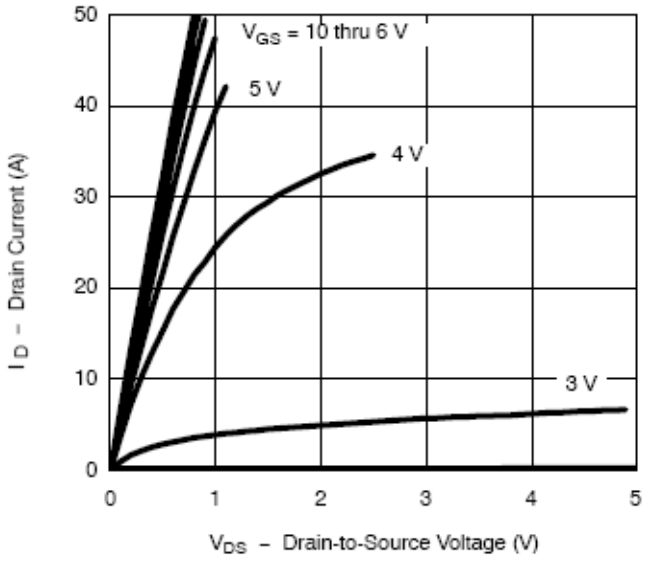
ELECTRICAL CHARACTERISTICS

(T_A=25℃ Unless otherwise noted)

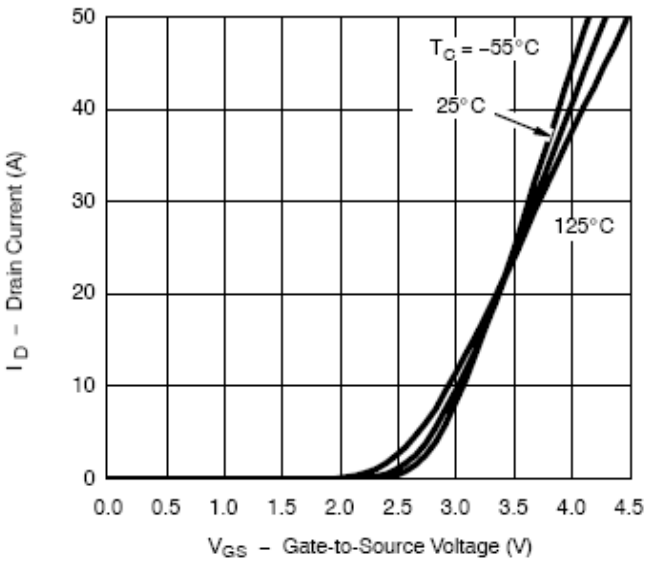
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V,I_D=-250uA	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=-250uA	-1.0		-3.0	
Gate Leakage Current	I_{GSS}	V_{DS}=0V,V_{GS}=±20V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-24V,V_{GS}=0V			-1	uA
		V_{DS}=-24V,V_{GS}=0V T_J=85℃			-5	
On-State Drain Current	$I_{D(on)}$	V_{DS}= -5V,V_{GS} =-4.5V	-40			A
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-10V,I_D=-7.2A		0.022	0.025	Ω
		V_{GS}=-4.5V,I_D=-5.6A		0.030	0.040	
Forward Transconductance	gfs	V_{DS}=-10V,I_D=-9.0A		24		S
Diode Forward Voltage	V_{SD}	I_S=-2.3A,V_{GS} =0V		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q_g	V_{DS}=-15V,V_{GS}=-10V I_D= -9.0A		16	24	nC
Gate-Source Charge	Q_{gs}			2.3		
Gate-Drain Charge	Q_{gd}			4.5		
Input Capacitance	C_{iss}	V_{DS}=-15V,V_{GS}=0V f=1MHz		1650		pF
Output Capacitance	C_{oss}			350		
Reverse Transfer Capacitance	C_{rss}			235		
Turn-On Time	$t_{d(on)}$	V_{DD}=-15V,R_L=15Ω I_D≡-1.0A,V_{GEN}=-10V R_G=6Ω		16	30	nS
	t_r			17	30	
Turn-Off Time	$t_{d(off)}$			65	110	
	t_f			35	80	

TYPICAL CHARACTERISTICS

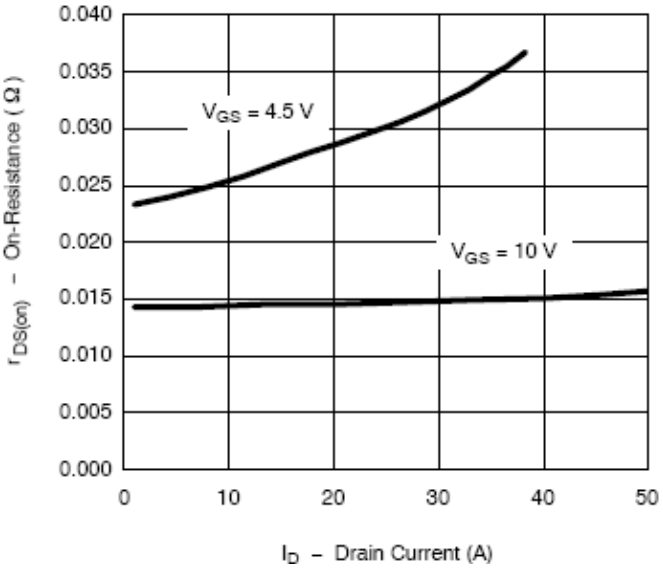
Output Characteristics



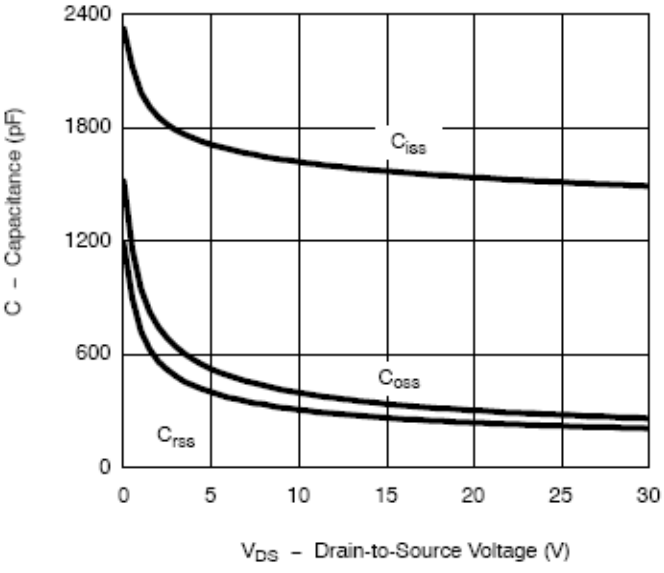
Transfer Characteristics



On-Resistance vs. Drain Current

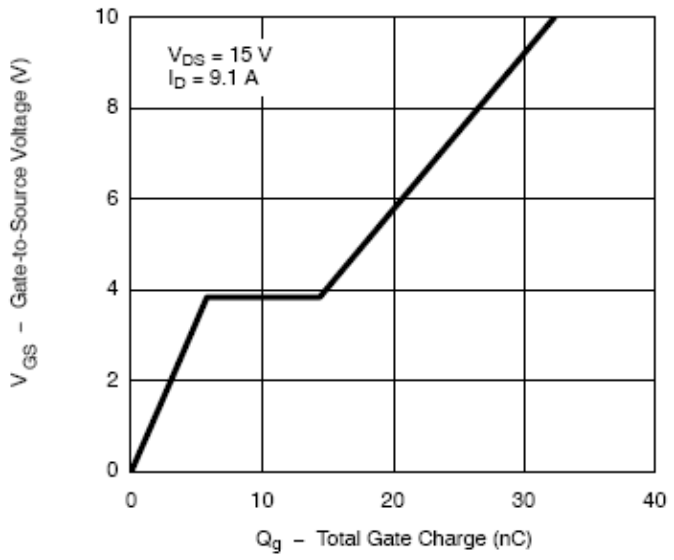


Capacitance

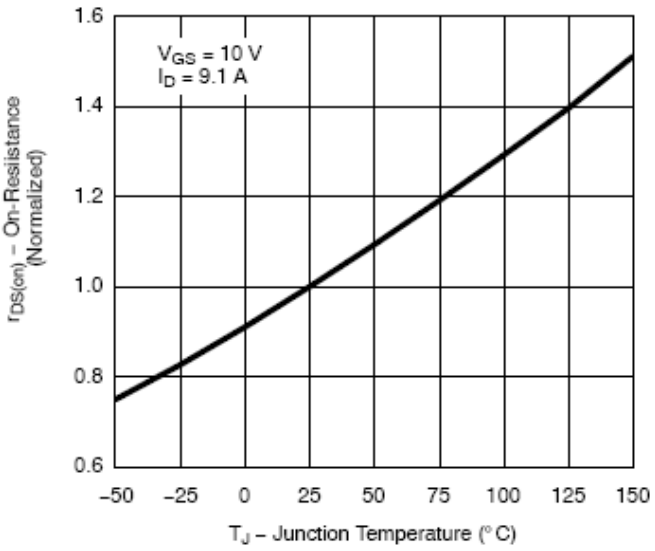


TYPICAL CHARACTERISTICS

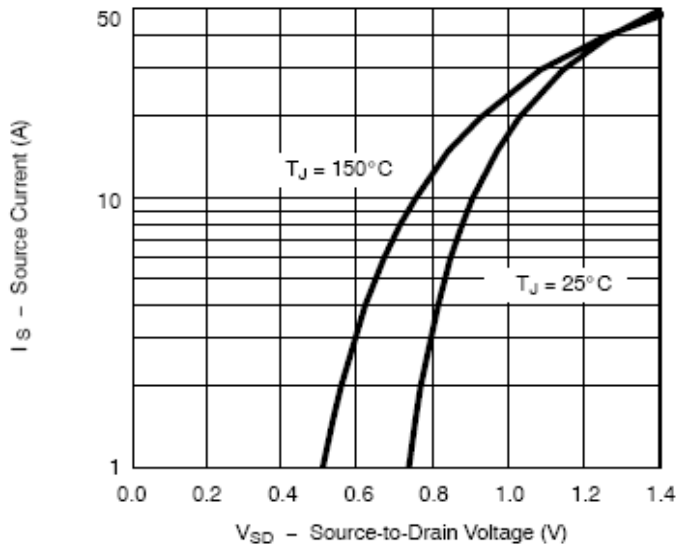
Gate Charge



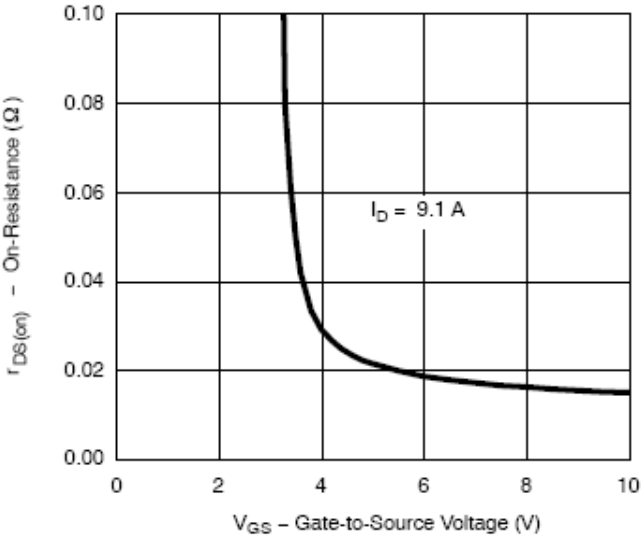
On-Resistance vs. Junction Temperature



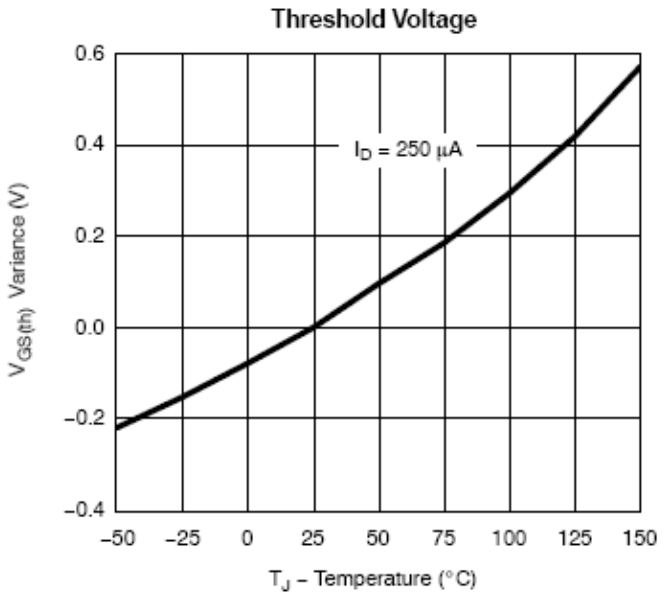
Source-Drain Diode Forward Voltage

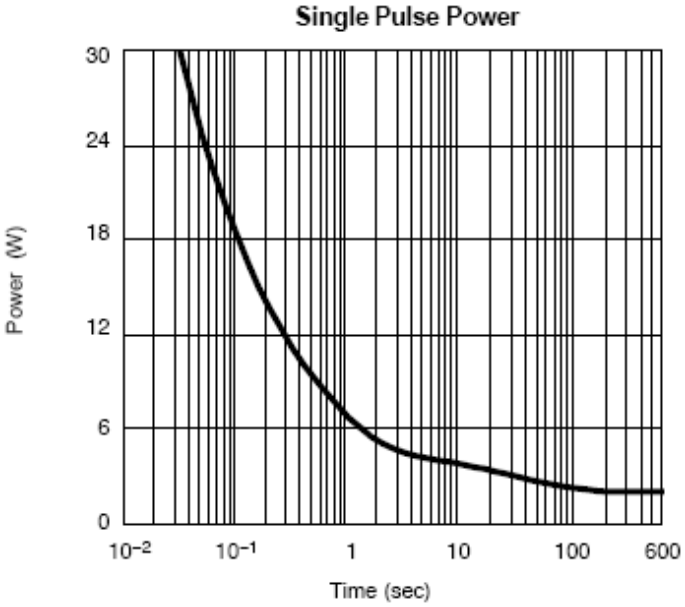


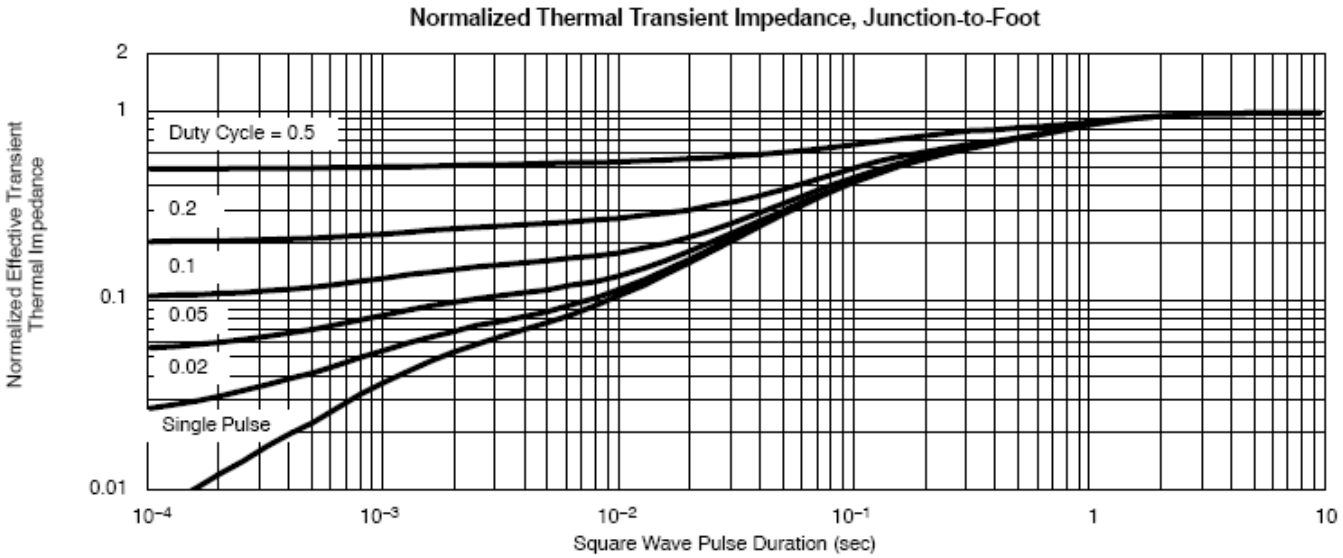
On-Resistance vs. Gate-to-Source Voltage



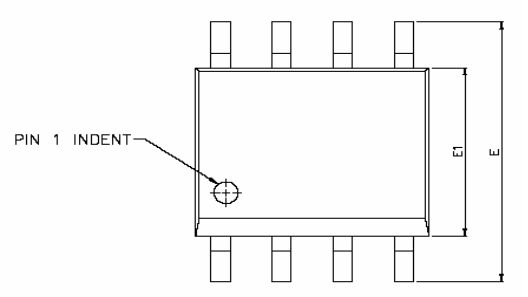
TYPICAL CHARACTERISTICS

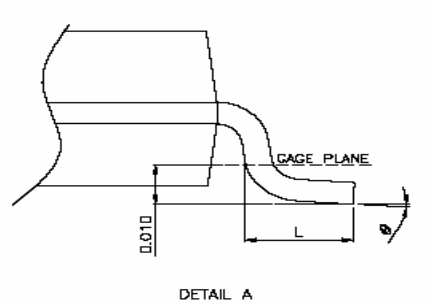


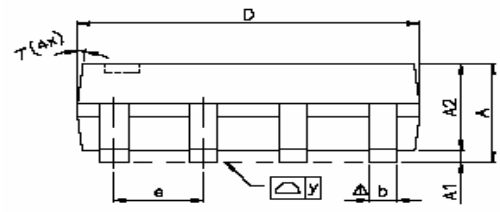


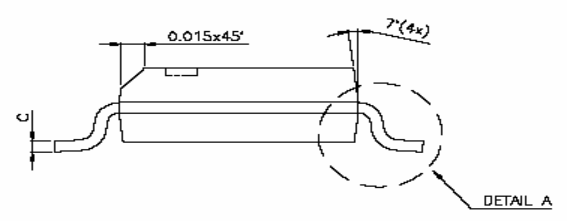


SOP- 8 PACKAGE OUTLINE









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
2 y	——	——	0.076	——	——	0.003
θ	0°	——	8°	0°	——	8°

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