



SPP9437

P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP9437 is the 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 .

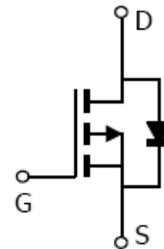
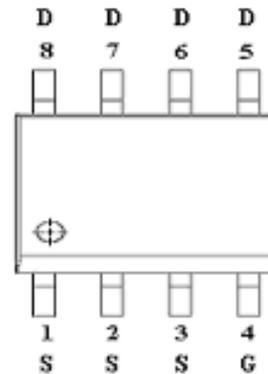
FEATURES

- -30V/-5.7A, $R_{DS(ON)}=45m\Omega@V_{GS}=-10V$
- -30V/-5.0A, $R_{DS(ON)}=50m\Omega@V_{GS}=-4.5V$
- -30V/-4.4A, $R_{DS(ON)}=65m\Omega@V_{GS}=-2.5V$
- ◆ Super high density cell design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and maximum DC current capability
- ◆ SOP-8 package design

APPLICATIONS

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

PIN CONFIGURATION(SOP-8)



PART MARKING



A : Lot Code
B : Date Code



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PIN DESCRIPTION

Pin	Symbol	Description
1	S	Source
2	S	Source
3	S	Source
4	G	Gate
5	D	Drain
6	D	Drain
7	D	Drain
8	D	Drain

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP9437S8RGB	SOP-8	SPP9437

※ SPP9437S8RGB :13" Tape Reel ; Pb – Free ; Halogen – Free

ABSOLUTE MAXIMUM RATINGS

(TA=25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit	
Drain-Source Voltage	VDSS	-30	V	
Gate –Source Voltage	VGSS	±12	V	
Continuous Drain Current(TJ=150°C)	ID	TA=25°C	-6.8	A
		TA=70°C	-4.6	
Pulsed Drain Current	IDM	-30	A	
Continuous Source Current(Diode Conduction)	IS	-2.3	A	
Power Dissipation	PD	TA=25°C	2.8	W
		TA=70°C	1.8	
Operating Junction Temperature	TJ	-55/150	°C	
Storage Temperature Range	TSTG	-55/150	°C	
Thermal Resistance-Junction to Ambient	RθJA	70	°C/W	



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ELECTRICAL CHARACTERISTICS

($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

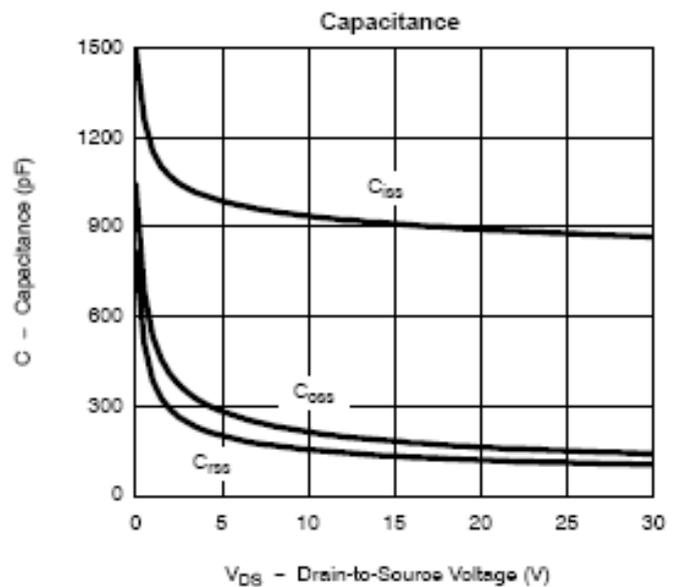
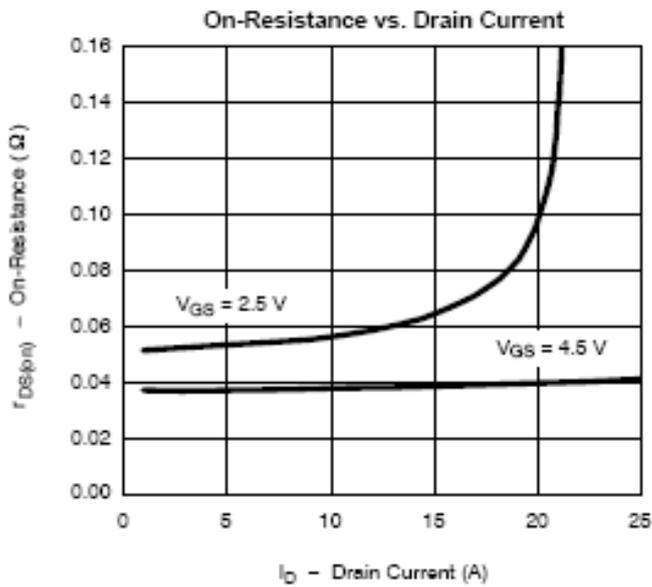
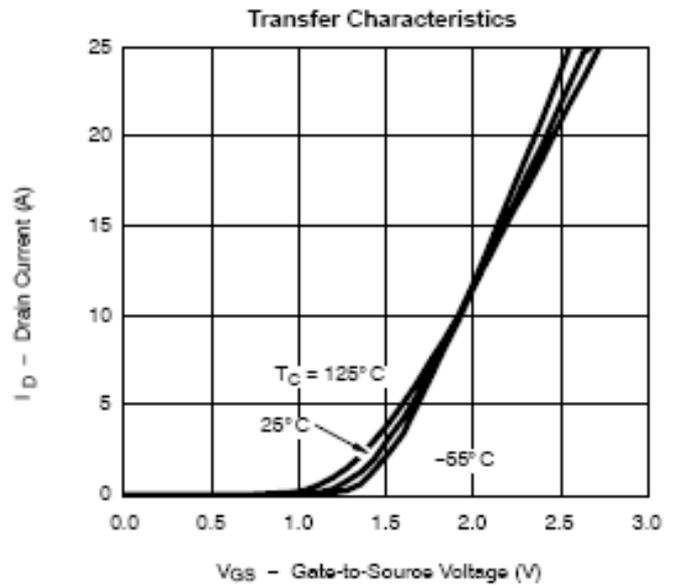
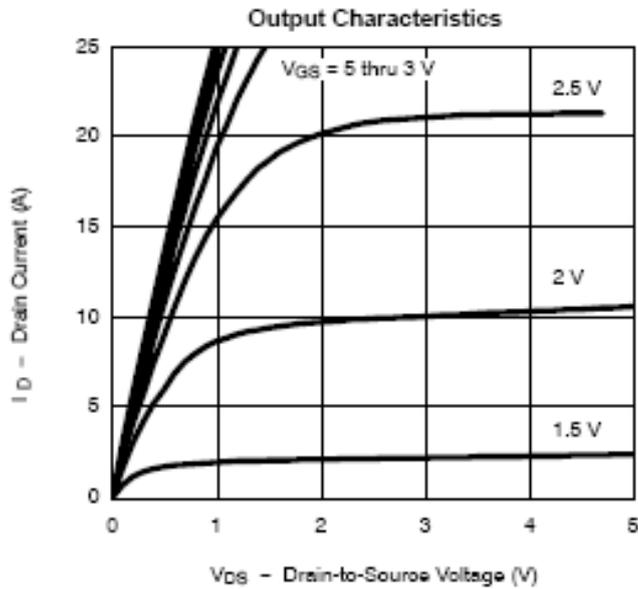
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.4		-1.0	
Gate Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 12V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$			-1	uA
		$V_{DS}=-24V, V_{GS}=0V$ $T_I=85^{\circ}\text{C}$			-5	
On-State Drain Current	$I_{D(on)}$	$V_{DS}=-5V, V_{GS}=-4.5V$	-10			A
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-5.7A$		0.035	0.045	Ω
		$V_{GS}=-4.5V, I_D=-5.0A$		0.040	0.050	
		$V_{GS}=-2.5V, I_D=-4.4A$		0.050	0.065	
Forward Transconductance	g_{fs}	$V_{DS}=-15V, I_D=-5.7A$		13		S
Diode Forward Voltage	V_{SD}	$I_S=-2.3A, V_{GS}=0V$		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS}=-15V, V_{GS}=-10V$ $I_D=-3.5A$		16	24	nC
Gate-Source Charge	Q_{gs}			2.3		
Gate-Drain Charge	Q_{gd}			4.5		
Input Capacitance	C_{iss}	$V_{DS}=-15V, V_{GS}=0V$ $f=1\text{MHz}$		680		pF
Output Capacitance	C_{oss}			120		
Reverse Transfer Capacitance	C_{rss}			75		
Turn-On Time	$t_{d(on)}$	$V_{DD}=-15V, R_L=15\Omega$ $I_D=-1.0A, V_{GEN}=-10V$ $R_G=6\Omega$		14	25	nS
	t_r			15	26	
Turn-Off Time	$t_{d(off)}$			42	70	
	t_f			30	50	



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TYPICAL CHARACTERISTICS

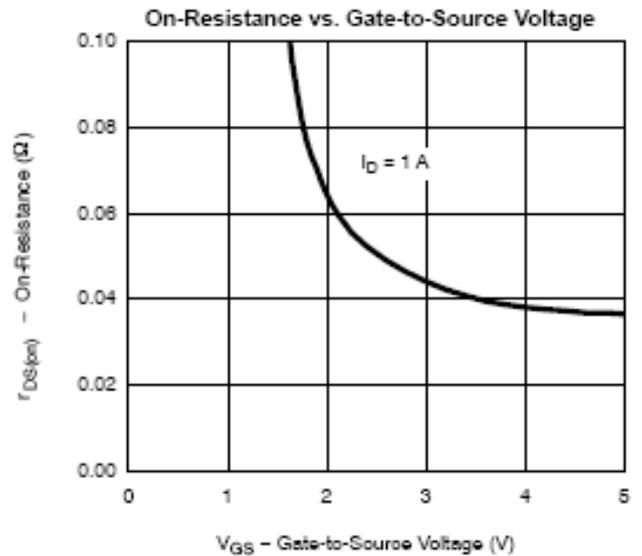
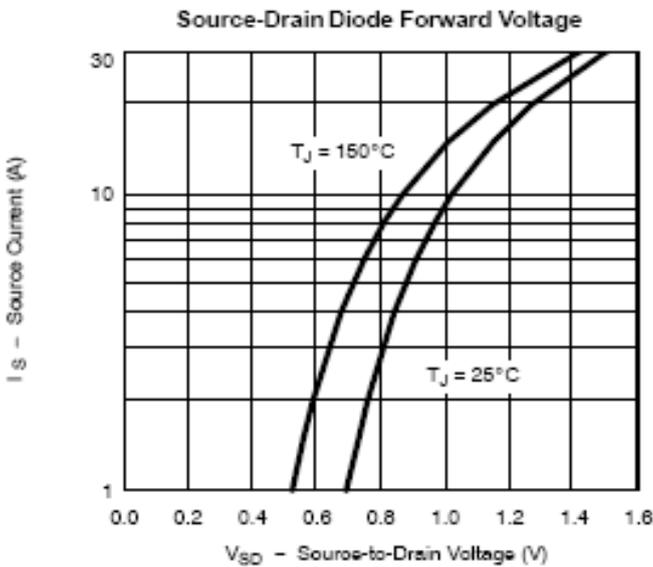
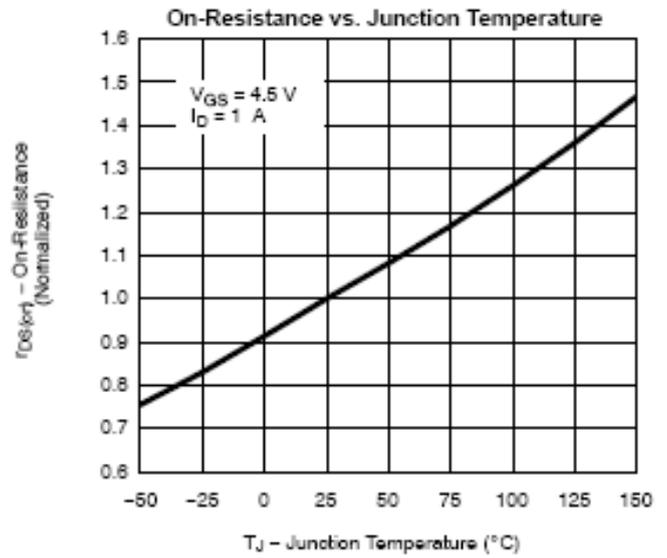
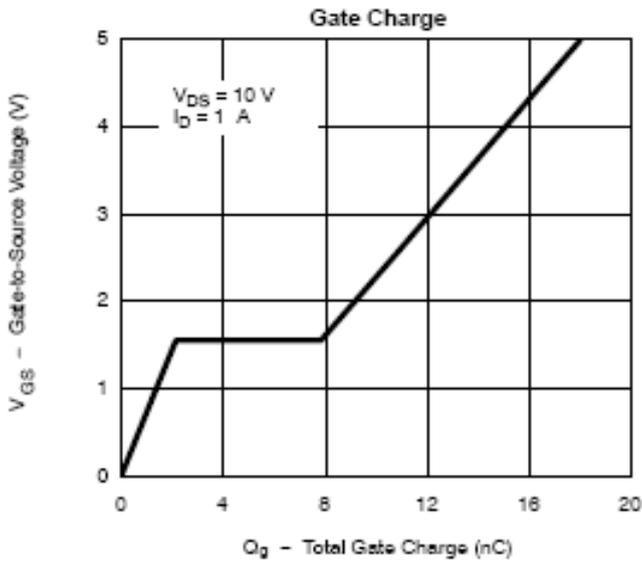




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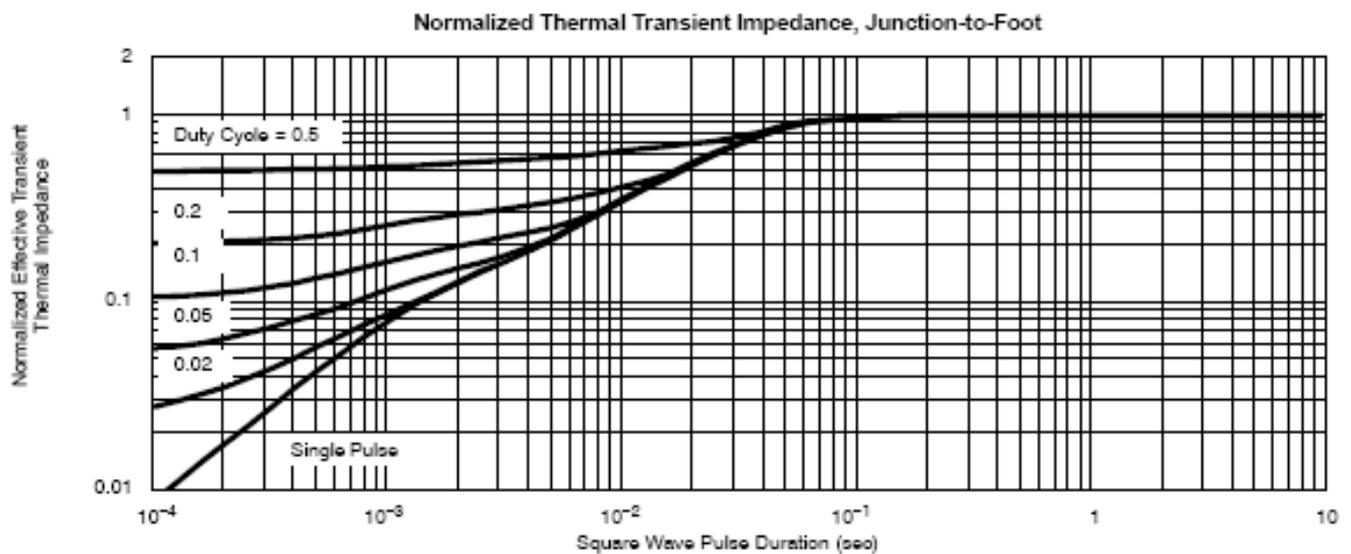
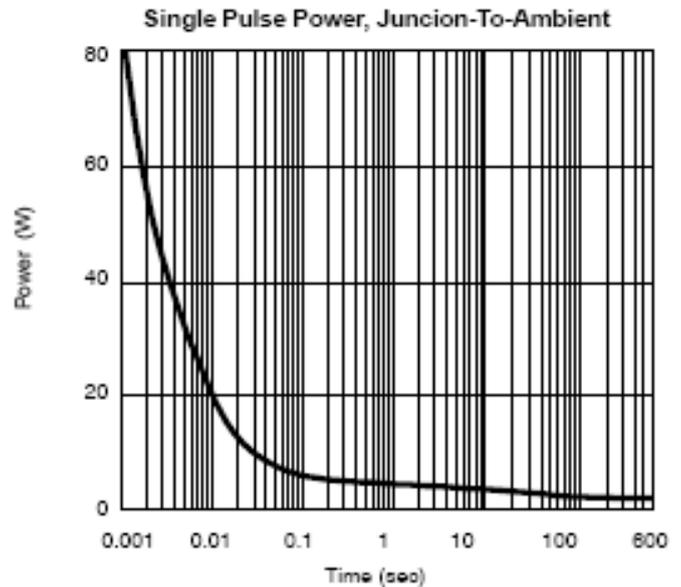
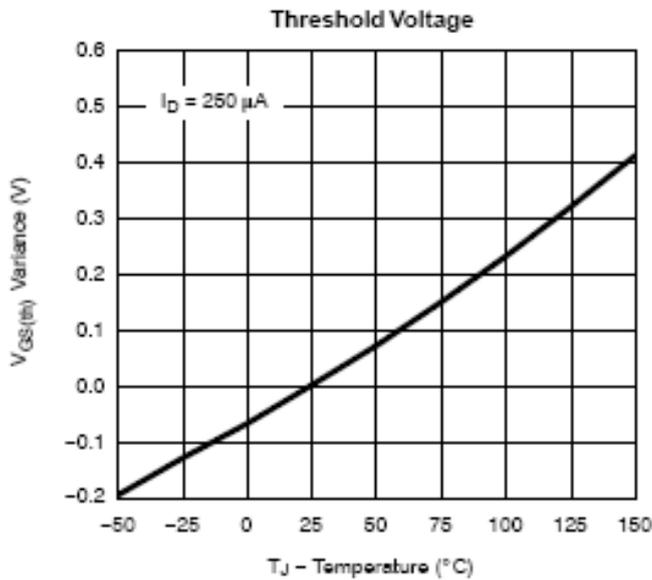




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TYPICAL CHARACTERISTICS





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