



SPP8839

P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP8839 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.

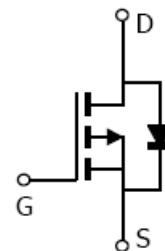
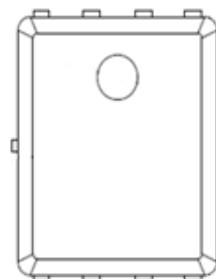
APPLICATIONS

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

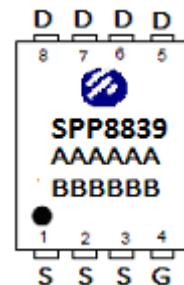
FEATURES

- ◆ -30V/-9.2A, $R_{DS(ON)}=20m\Omega$ @ $V_{GS}=-10V$
- ◆ -30V/-7.0A, $R_{DS(ON)}=30m\Omega$ @ $V_{GS}=-4.5V$
- ◆ Super high density cell design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and maximum DC current capability
- ◆ PPAK5x6-8 package design

PIN CONFIGURATION(PPAK5x6-8)



PART MARKING



A : Lot Code
B : Date Code
(YY / MM / DD)



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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
SPP8839DN8RGB	PPAK5x6-8L	SPP8839

※ SPP8839DN8RGB : 13" Tape Reel ; Pb – Free; Halogen – Free

ABSOLUTE MAXIMUM RATINGS

(TA=25°C 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°C)	T _A =25°C	ID	A
	T _A =70°C		
Pulsed Drain Current	I _{DM}	-95	A
Continuous Source Current(Diode Conduction)	I _S	-3	A
Power Dissipation	P _D	83	W
Operating Junction Temperature	T _J	-55/150	°C
Storage Temperature Range	T _{STG}	-55/150	°C
Thermal Resistance-Junction to Case	R _{θJC}	1.5	
Thermal Resistance-Junction to Ambient	R _{θJA}	55	°C/W



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ELECTRICAL CHARACTERISTICS

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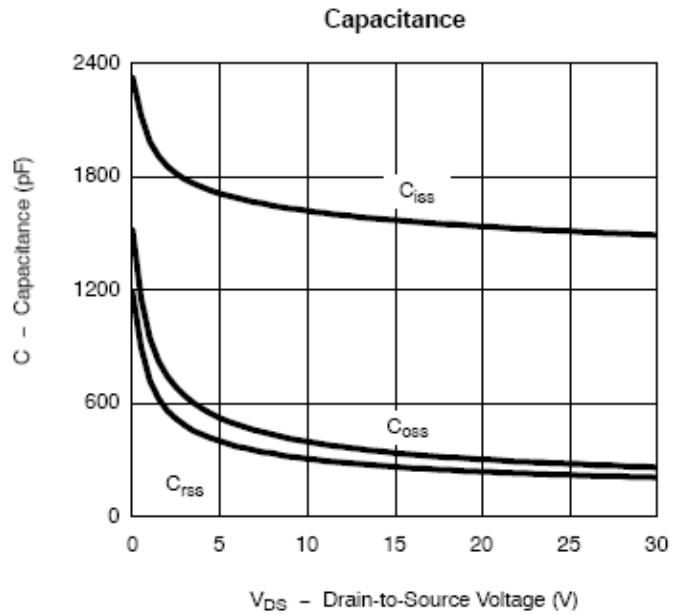
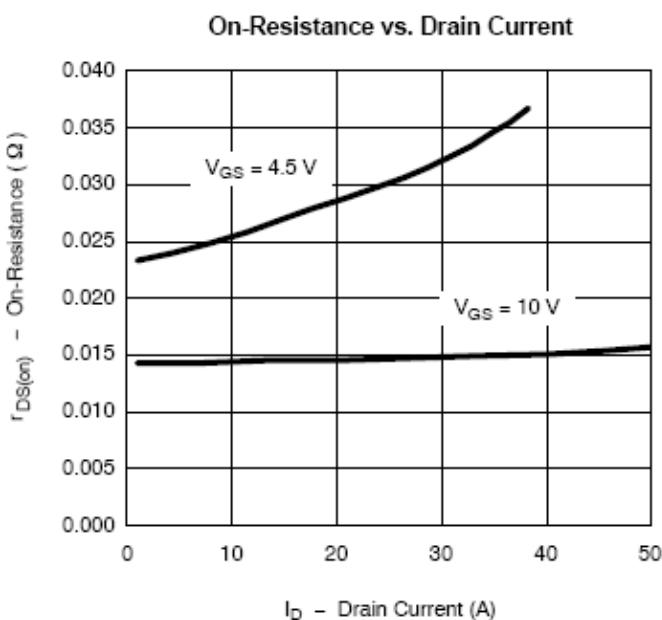
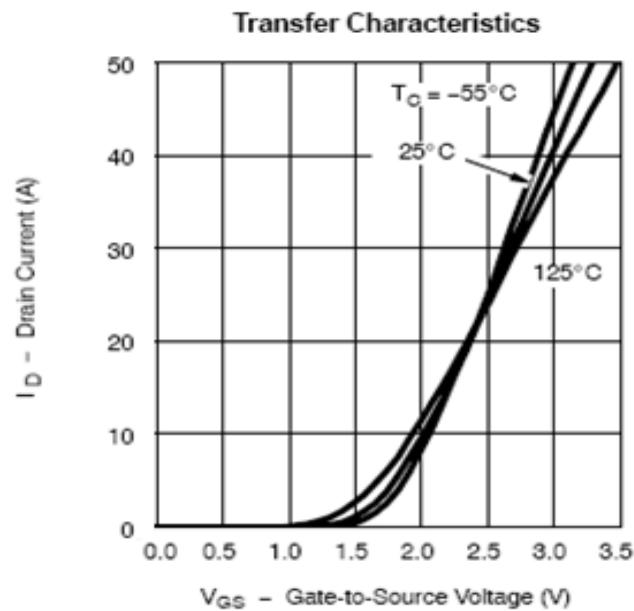
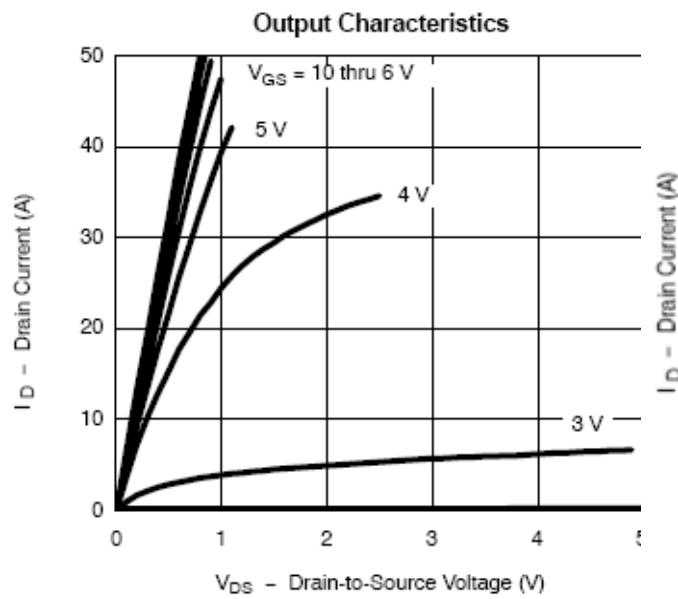
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, ID=-250uA	-30			V
Gate Threshold Voltage	V _{GS(th)}	V _{Ds} =V _{GS} , ID=-250uA	-0.7		-1.6	
Gate Leakage Current	I _{GSS}	V _{Ds} =0V, V _{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{Ds} =-21V, V _{GS} =0V			-1	uA
		V _{Ds} =-21V, V _{GS} =0V T _J =55°C			-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, ID=-9.2A		18	20	mΩ
		V _{GS} =-4.5V, ID=-7.0A		25	30	
Forward Transconductance	g _{fs}	V _{Ds} =-10V, ID=-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 ID= -9.0A		20	30	nC
Gate-Source Charge	Q _{gs}			3.5		
Gate-Drain Charge	Q _{gd}			4.8		
Input Capacitance	C _{iss}	V _{Ds} =-15V, V _{GS} =0V f=1MHz		1850		pF
Output Capacitance	C _{oss}			450		
Reverse Transfer Capacitance	C _{rss}			335		
Turn-On Time	t _{d(on)}	V _{DD} =-15V, R _L =15Ω ID=-1.0A, V _{GEN} =-10V R _G =6Ω		20	30	nS
	t _r			20	30	
Turn-Off Time	t _{d(off)}			75	110	
	t _f			40	80	



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TYPICAL CHARACTERISTICS

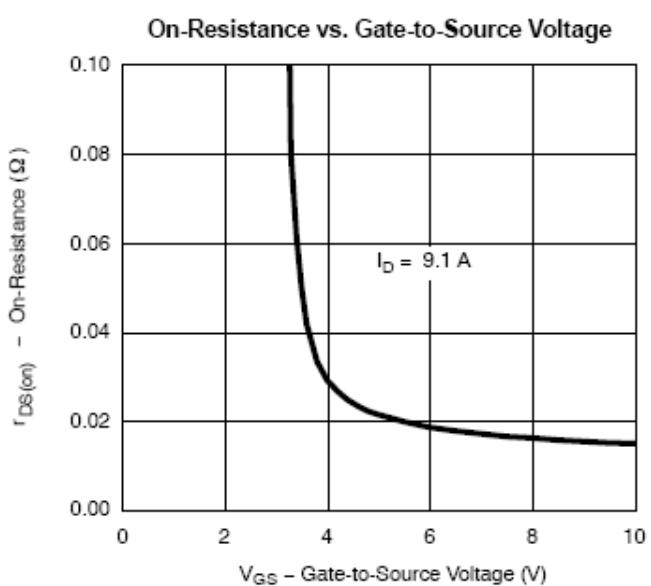
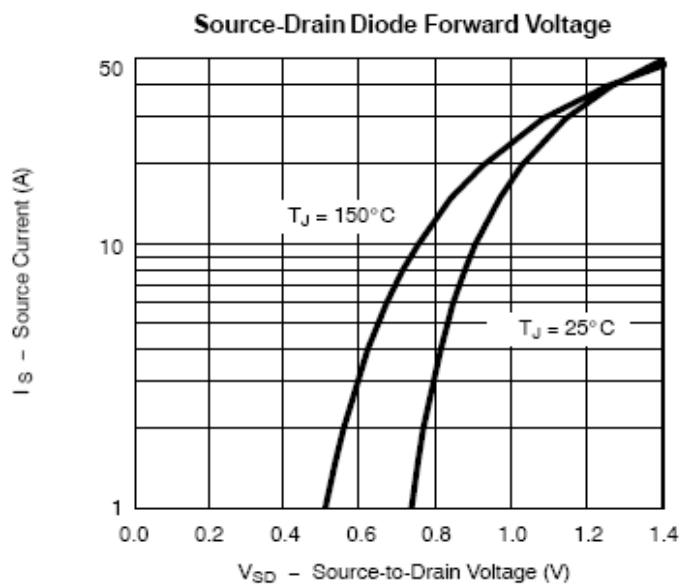
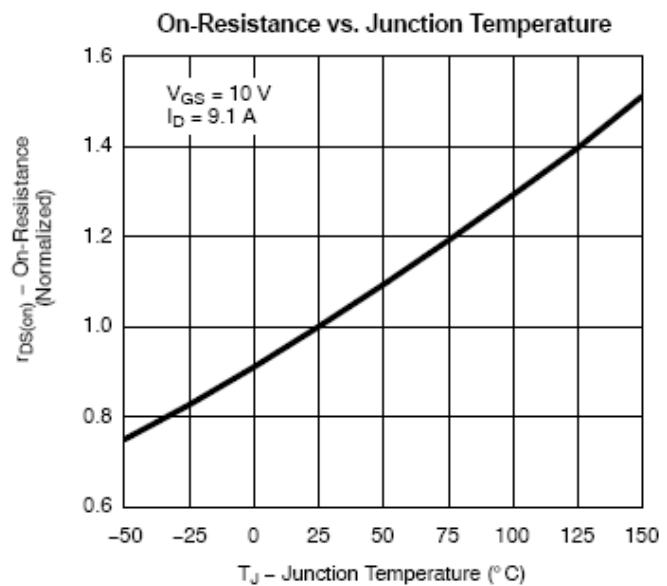
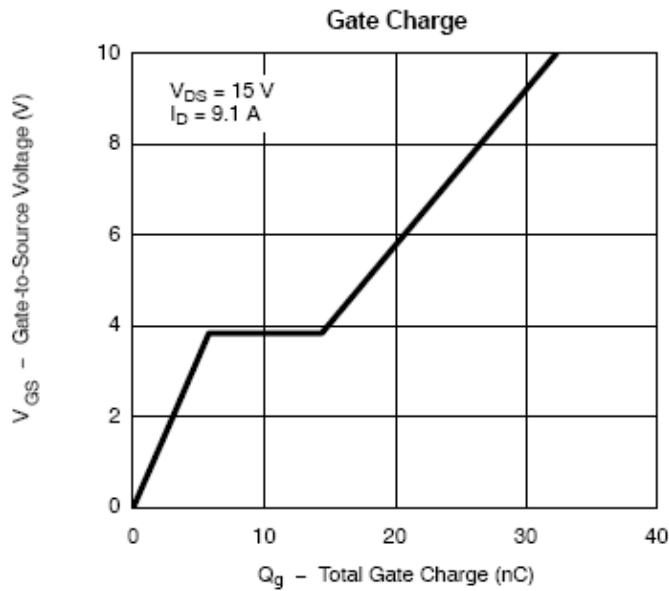




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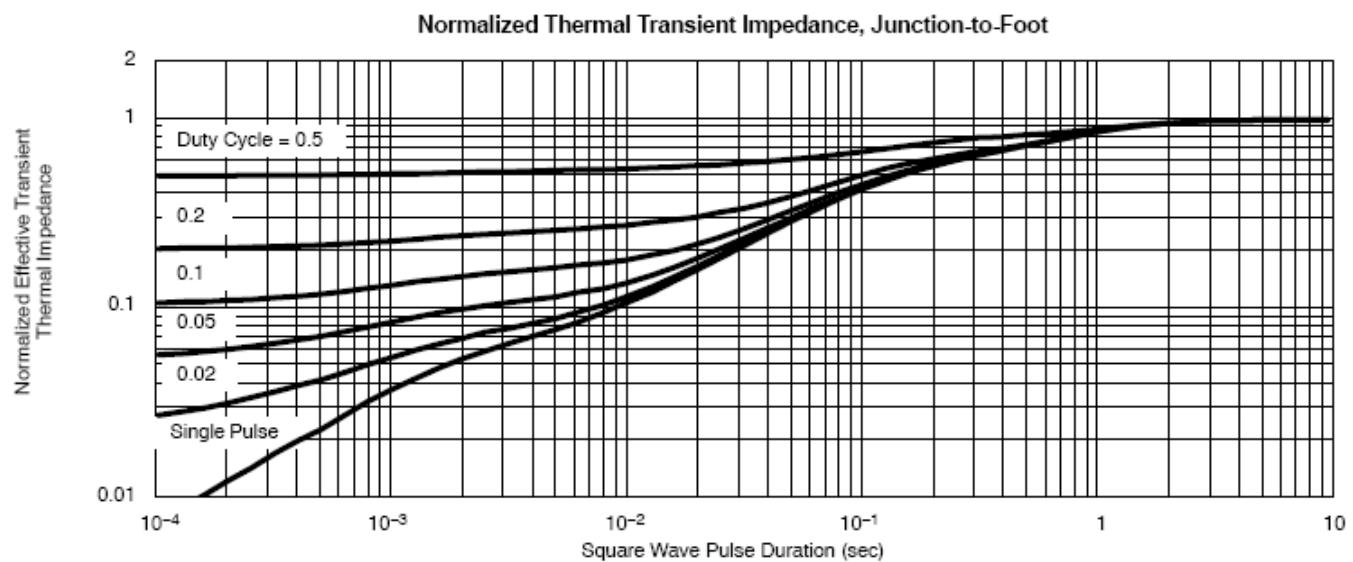
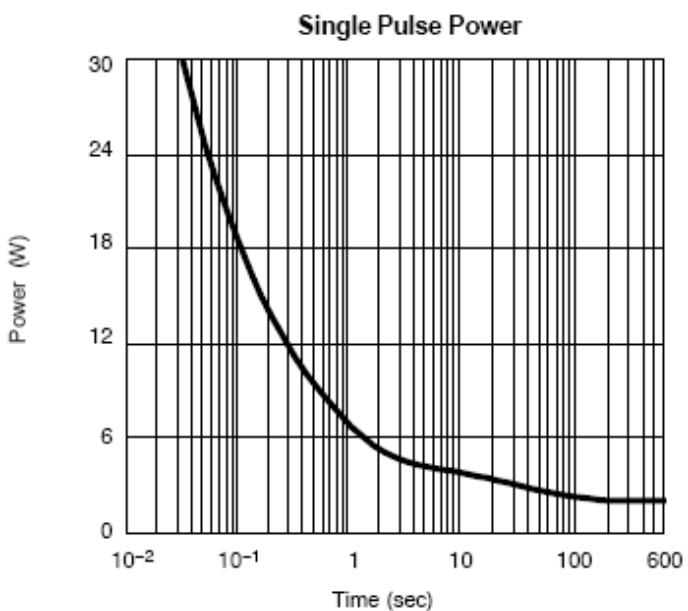
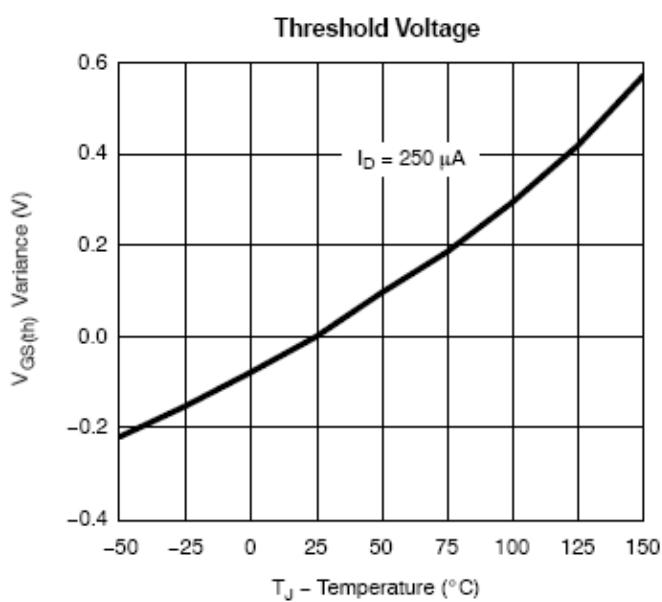




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TYPICAL CHARACTERISTICS





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