



# SPP8803B

## P-Channel Enhancement Mode MOSFET

### DESCRIPTION

The SPP8803B 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 .

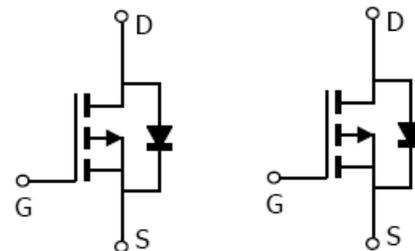
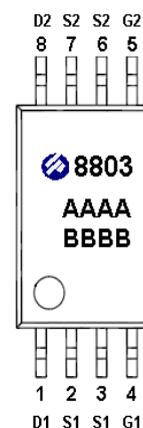
### FEATURES

- -20V/-7.0A,RDS(ON)=22mΩ@VGS=-4.5V
- -20V/-6.0 A,RDS(ON)=28mΩ@VGS=-2.5V
- -20V/-5.0 A ,RDS(ON)=40mΩ@VGS=-1.8V
- Super high density cell design for extremely Low RDS (ON)
- Exceptional on-resistance and maximum DC current capability
- TSSOP-8 package design

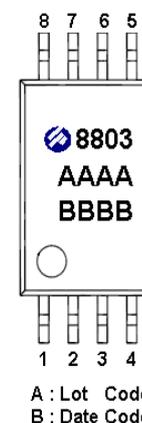
### APPLICATIONS

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

### PIN CONFIGURATION(TSSOP-8)



### PART MARKING





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### PIN DESCRIPTION

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

### ORDERING INFORMATION

Part Number	Package	Part Marking
SPP8803BTS8RGB	TSSOP-8	8803

※ SPP8803BTS8RGB : 13" Tape Reel ; Pb – Free; Halogen -Free

### ABSOLUTE MAXIMUM RATINGS

(TA=25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit
Drain-Source Voltage	V <sub>DSS</sub>	-20	V
Gate –Source Voltage	V <sub>GSS</sub>	±12	V
Continuous Drain Current(T <sub>J</sub> =150°C)	I <sub>D</sub>	TA=25°C	-7.0
		TA=70°C	-5.8
Pulsed Drain Current	I <sub>DM</sub>	-30	A
Continuous Source Current(Diode Conduction)	I <sub>S</sub>	-2.3	A
Power Dissipation	P <sub>D</sub>	TA=25°C	1.5
		TA=70°C	0.9
Operating Junction Temperature	T <sub>J</sub>	-55/150	°C
Storage Temperature Range	T <sub>STG</sub>	-55/150	°C
Thermal Resistance-Junction to Ambient	R <sub>θJA</sub>	80	°C/W



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### ELECTRICAL CHARACTERISTICS

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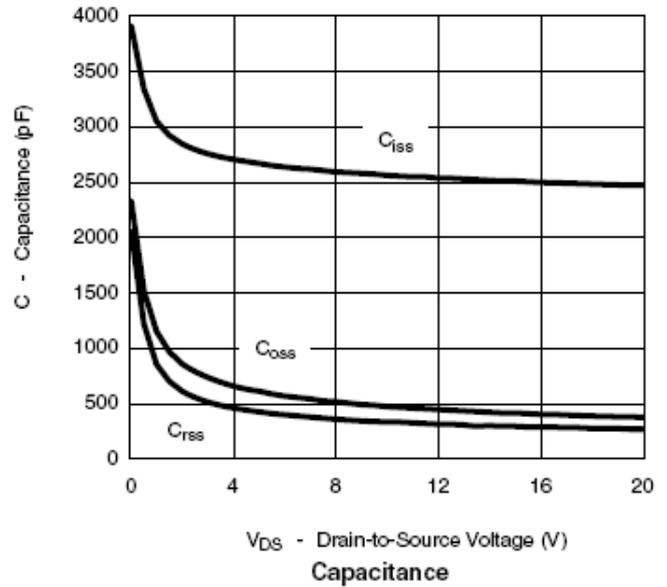
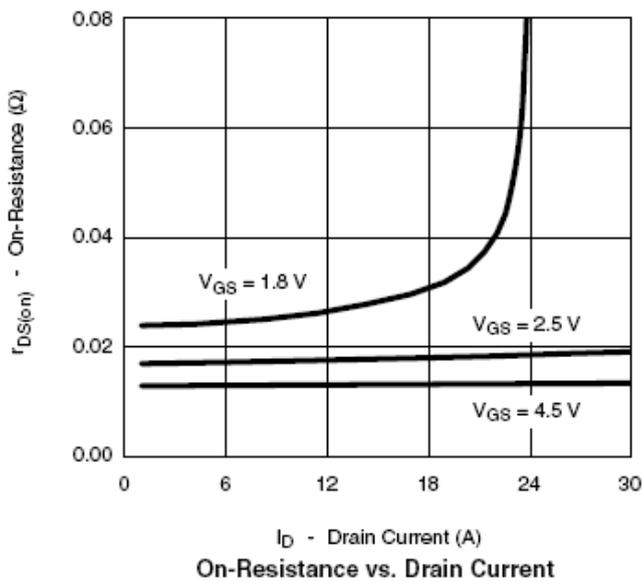
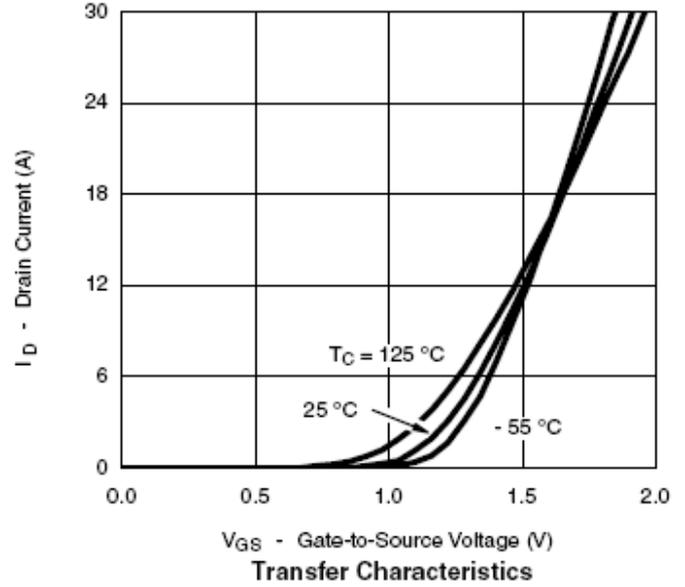
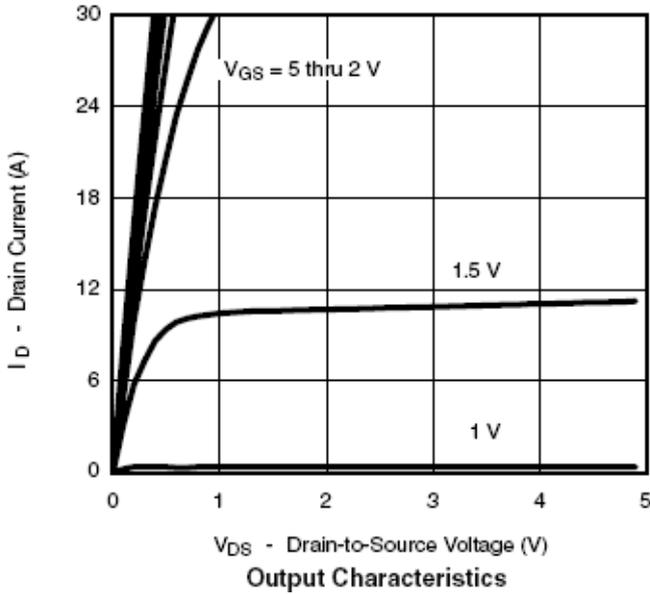
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
<b>Static</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-20			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.35		-0.9	V
Gate Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 12V$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-16V, V_{GS}=0V$			-1	uA
		$V_{DS}=-16V, V_{GS}=0V$ $T_J=55^\circ C$			-10	
On-State Drain Current	$I_{D(on)}$	$V_{DS} \leq -5V, V_{GS}=-4.5V$	-20			A
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-4.5V, I_D=-7.0A$		0.018	0.022	$\Omega$
		$V_{GS}=-2.5V, I_D=-6.0A$		0.025	0.028	
		$V_{GS}=-1.8V, I_D=-5.0A$		0.035	0.040	
Forward Transconductance	$g_{fs}$	$V_{DS}=-5.0V, I_D=-10.0A$		36		S
Diode Forward Voltage	$V_{SD}$	$I_S=-2.5A, V_{GS}=0V$		-0.8	-1.2	V
<b>Dynamic</b>						
Total Gate Charge	$Q_g$	$V_{DS}=-10V, V_{GS}=-5.0V$ $I_D=-10.0A$		30	45	nC
Gate-Source Charge	$Q_{gs}$			4.5		
Gate-Drain Charge	$Q_{gd}$			8.0		
Input Capacitance	$C_{iss}$	$V_{DS}=-10V, V_{GS}=0V$ $f=1MHz$		2670		pF
Output Capacitance	$C_{oss}$			520		
Reverse Transfer Capacitance	$C_{rss}$			480		
Turn-On Time	$t_{d(on)}$	$V_{DD}=-10V, R_L=15\Omega$ $I_D=-1.0A, V_{GEN}=-4.5V$ $R_G=6\Omega$		25	40	nS
	$t_r$			45	70	
Turn-Off Time	$t_{d(off)}$			145	240	
	$t_f$			70	115	



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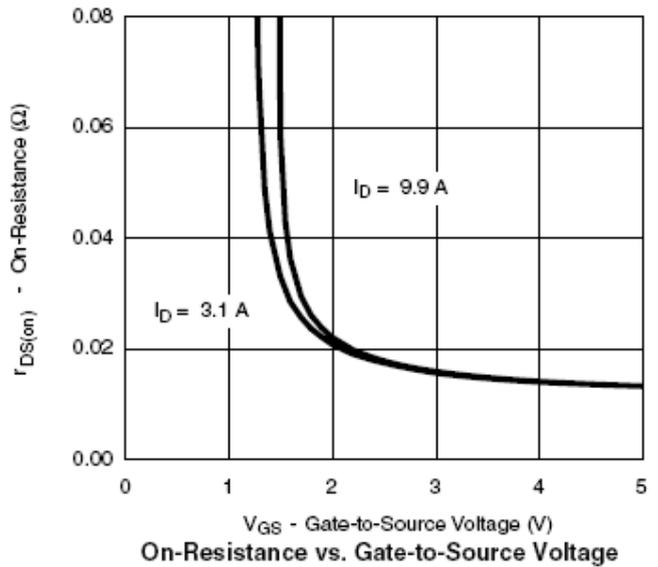
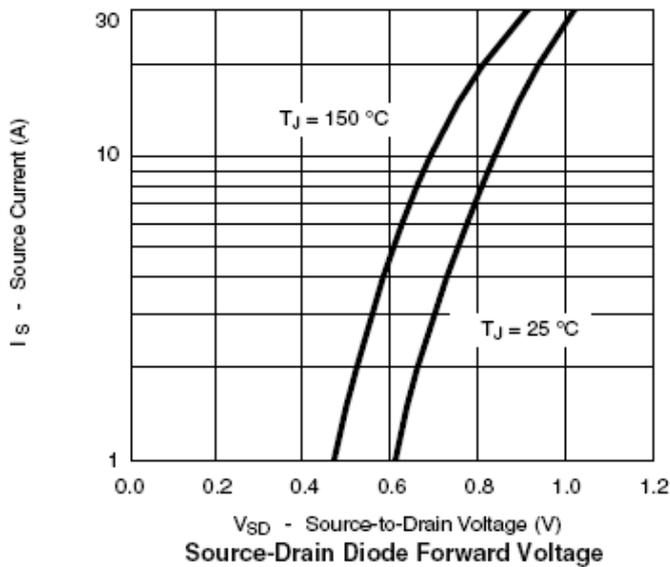
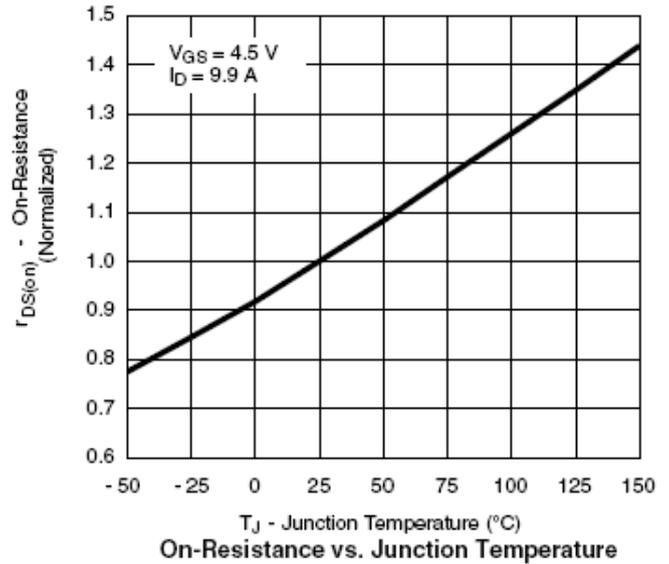
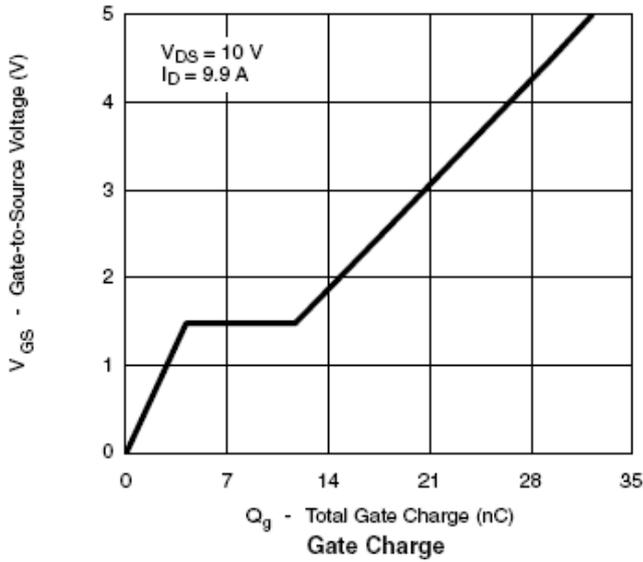




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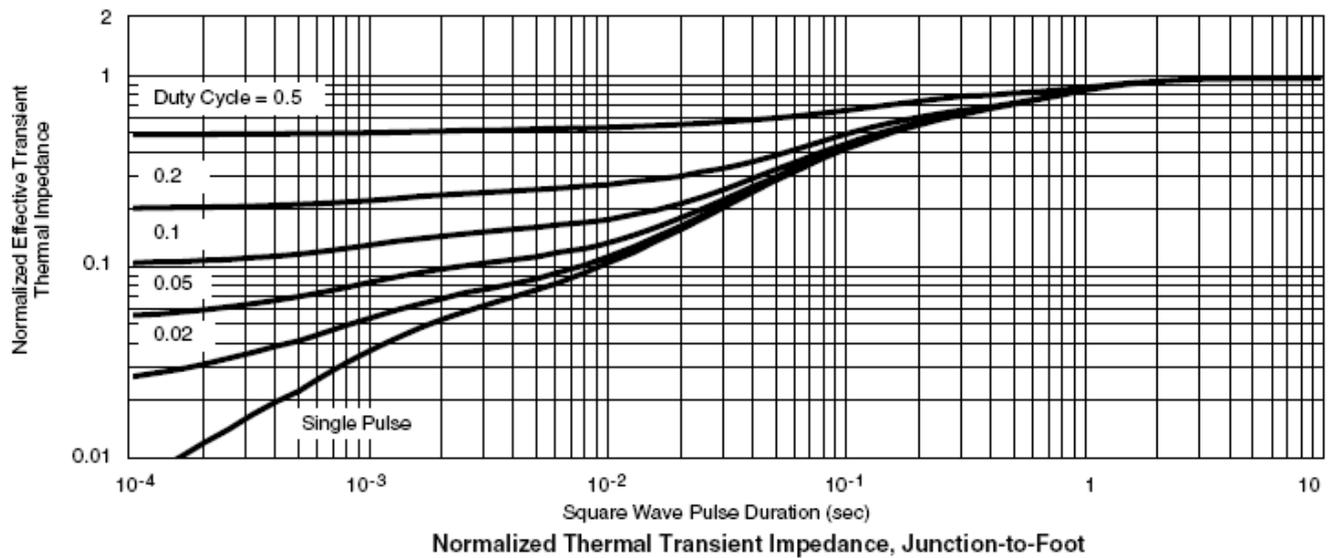
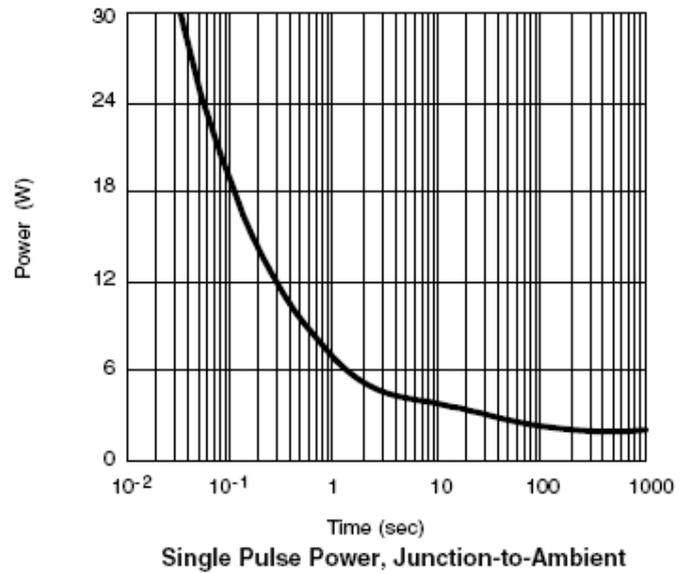
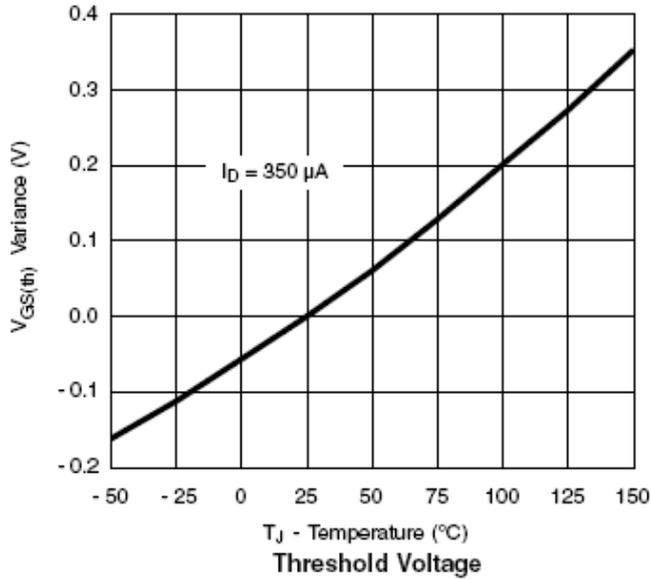




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### TYPICAL CHARACTERISTICS





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