



SPP2305

P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP2305 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 such as cellular phone and notebook computer power management and other battery powered circuits, and low in-line power loss are needed in a very small outline surface mount package.

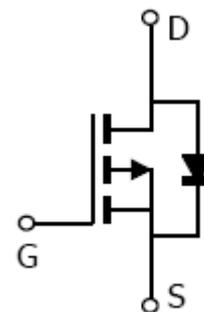
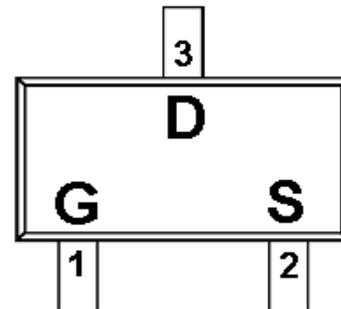
FEATURES

- -15V/-3.5A,RDS(ON)=70mΩ@VGS=-4.5V
- -15V/-3.0A,RDS(ON)=85mΩ@VGS=-2.5V
- -15V/-2.0A,RDS(ON)=105mΩ@VGS=-1.8V
- Super high density cell design for extremely low RDS (ON)
- Exceptional on-resistance and maximum DC current capability
- SOT-23-3L package design

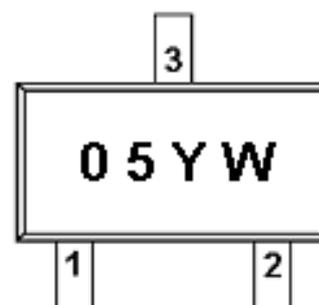
APPLICATIONS

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

PIN CONFIGURATION(SOT-23-3L)



PART MARKING



Y : Year Code
W : Week Code



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PIN DESCRIPTION

Pin	Symbol	Description
1	G	Gate
2	S	Source
3	D	Drain

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP2305S23RGB	SOT-23-3L	05

※ Week Code : A ~ Z (1 ~ 26) ; a ~ z (27 ~ 52)

※ SPP2305S23RGB : Tape Reel ; Pb – Free ; Halogen - Free

ABSOLUTE MAXIMUM RATINGS

(TA=25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit	
Drain-Source Voltage	V _{DSS}	-15	V	
Gate –Source Voltage	V _{GSS}	±12	V	
Continuous Drain Current(T _J =150°C)	I _D	TA=25°C	-3.5	A
		TA=70°C	-2.8	
Pulsed Drain Current	I _{DM}	-10	A	
Continuous Source Current(Diode Conduction)	I _S	-1.6	A	
Power Dissipation	P _D	TA=25°C	1.25	W
		TA=70°C	0.8	
Operating Junction Temperature	T _J	150	°C	
Storage Temperature Range	T _{STG}	-55/150	°C	
Thermal Resistance-Junction to Ambient	R _{θJA}	120	°C/W	



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ELECTRICAL CHARACTERISTICS

(T_A=25°C Unless otherwise noted)

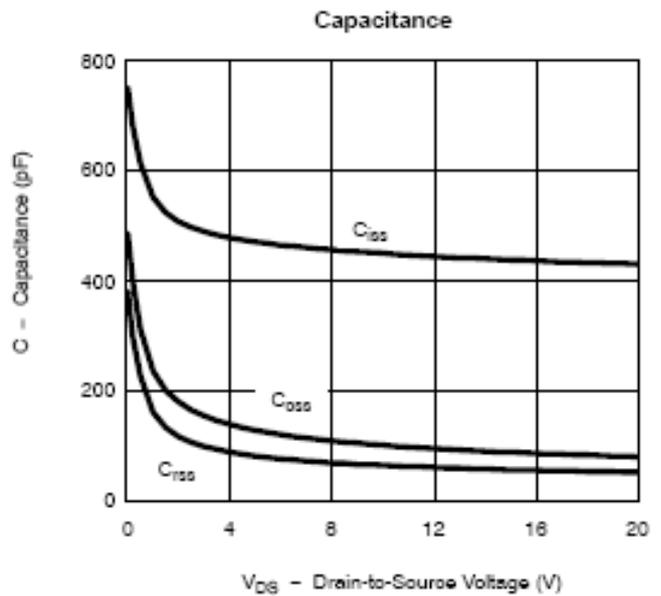
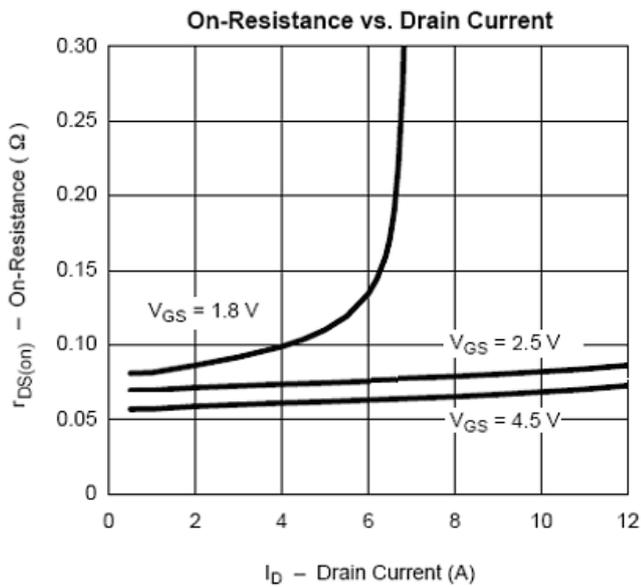
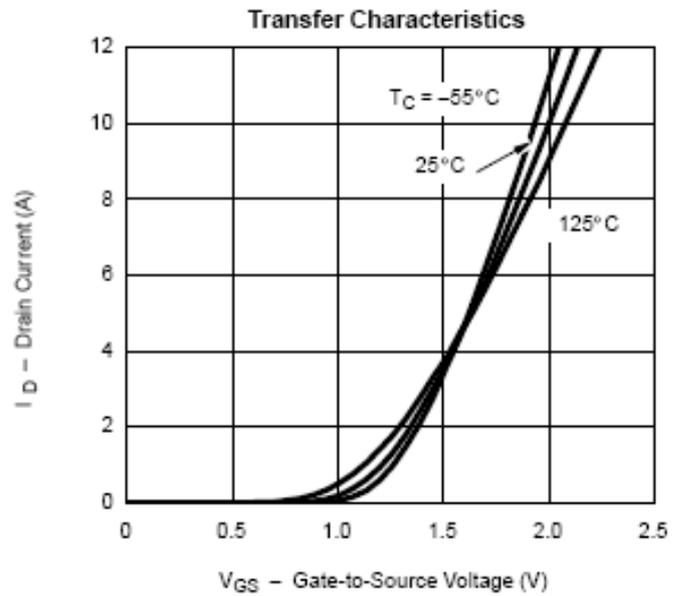
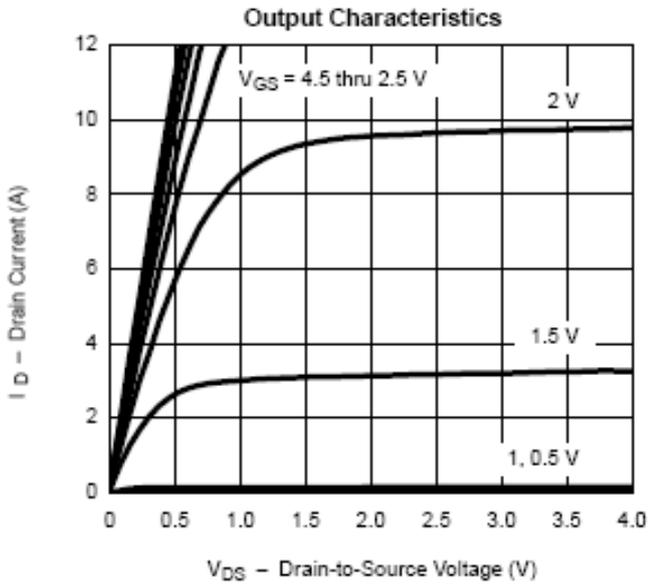
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250uA	-15			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250uA	-0.35		-0.85	
Gate Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±10V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-12V, V _{GS} =0V			-1	uA
		V _{DS} =-12V, V _{GS} =0V T _J =55°C			-10	
On-State Drain Current	I _{D(on)}	V _{DS} ≤ -5V, V _{GS} =-4.5V	-4			A
		V _{DS} ≤ -5V, V _{GS} =-2.5V	-2			
Drain-Source On-Resistance	R _{DSON}	V _{GS} =-4.5V, I _D =-3.5A		0.055	0.070	Ω
		V _{GS} =-2.5V, I _D =-3.0A		0.065	0.085	
		V _{GS} =-1.8V, I _D =-2.0A		0.085	0.105	
Forward Transconductance	g _{fs}	V _{DS} =-5V, I _D =-3.5A		8.5		S
Diode Forward Voltage	V _{SD}	I _S =-1.5A, V _{GS} =0V		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q _g	V _{DS} =-6V, V _{GS} =-4.5V I _D =-2.8A		4.8	8	nC
Gate-Source Charge	Q _{gs}			1.0		
Gate-Drain Charge	Q _{gd}			1.0		
Input Capacitance	C _{iss}	V _{DS} =-6V, V _{GS} =0V f=1MHz		485		pF
Output Capacitance	C _{oss}			85		
Reverse Transfer Capacitance	C _{rss}			40		
Turn-On Time	t _{d(on)}	V _{DD} =-6V, R _L =6Ω I _D =-1.0A, V _{GEN} =-4.5V R _G =6Ω		10	16	nS
	t _r			13	23	
Turn-Off Time	t _{d(off)}			18	25	
	t _f			15	20	



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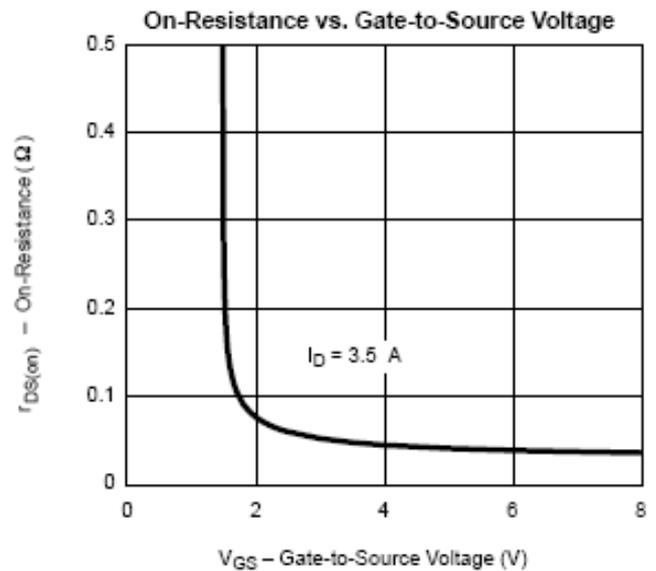
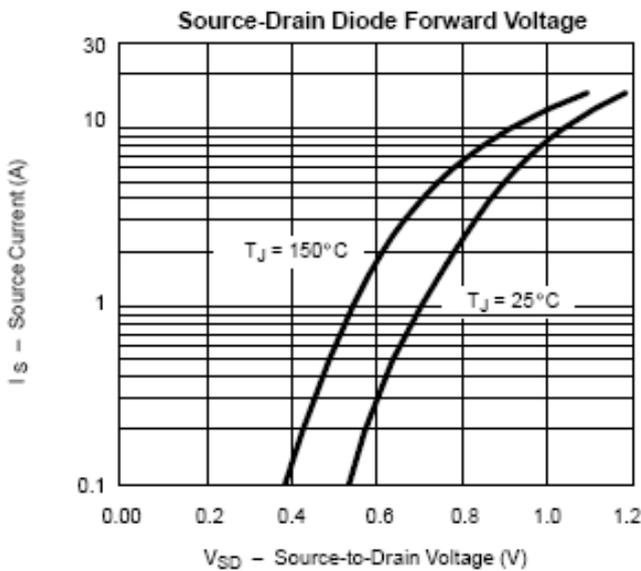
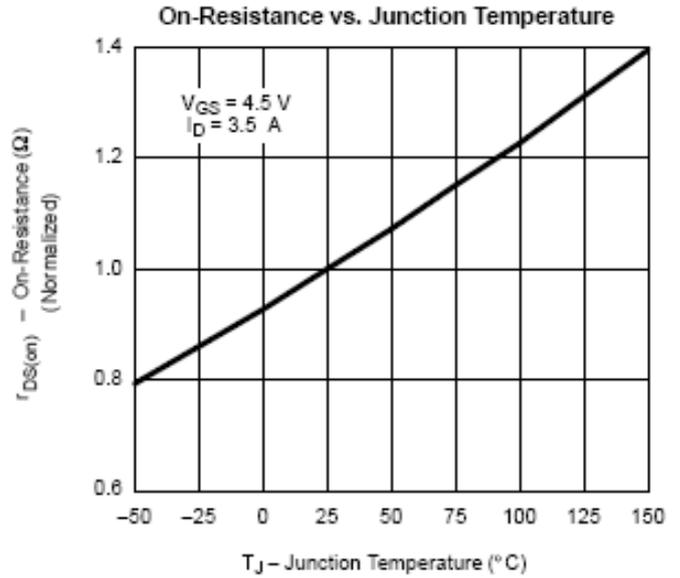
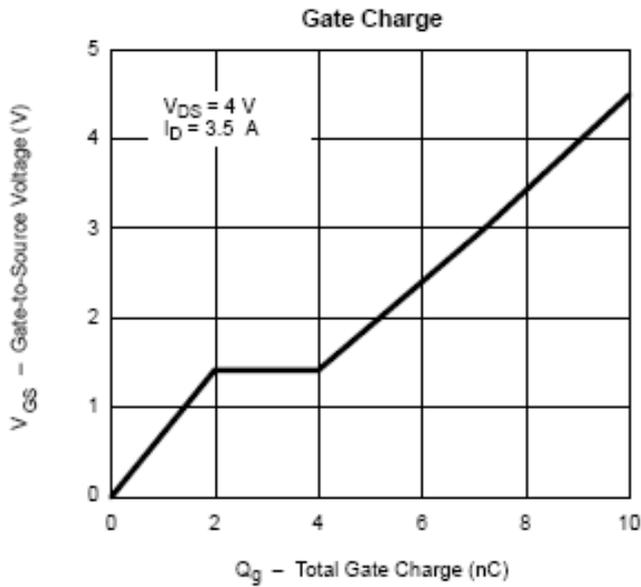
TYPICAL CHARACTERISTICS





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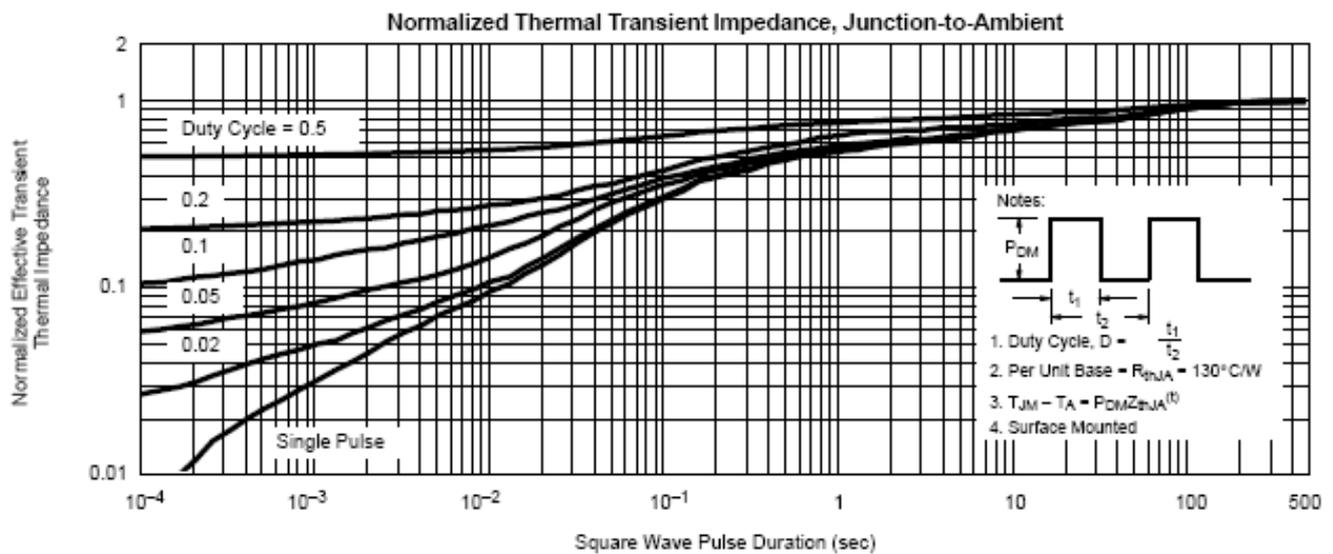
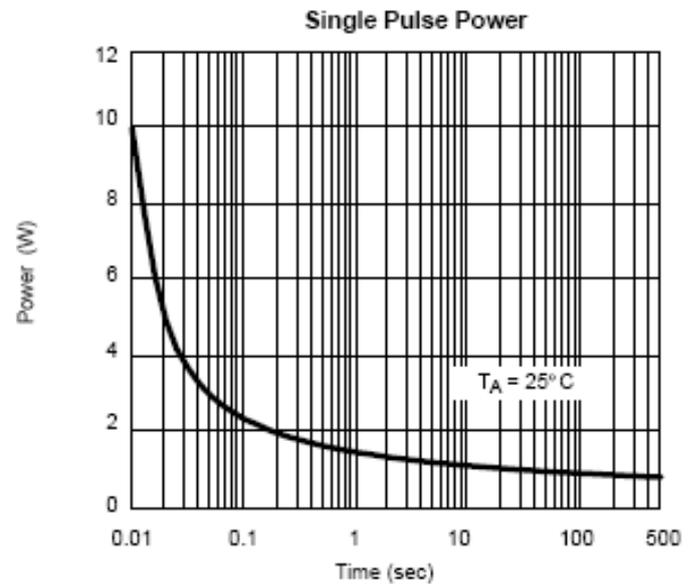
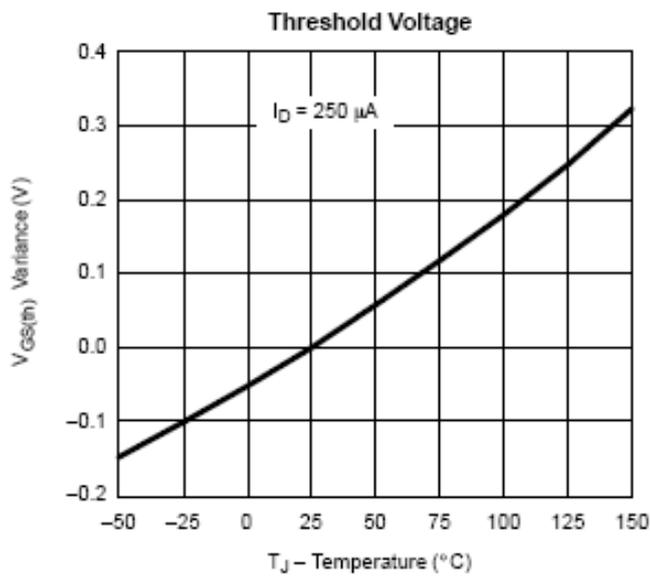
TYPICAL CHARACTERISTICS





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SYNC Power Corporation

7F-2, No.3-1, Park Street

NanKang District (NKSP), Taipei, Taiwan, 115, R.O.C

Phone: 886-2-2655-8178

Fax: 886-2-2655-8468

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