



SPP6506

Dual P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP6506 is the Dual P-Channel 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 and provide superior switching performance. These devices are particularly suited for low voltage applications such as notebook computer power management and other battery powered circuits where high-side switching , low in-line power loss, and resistance to transients are needed.

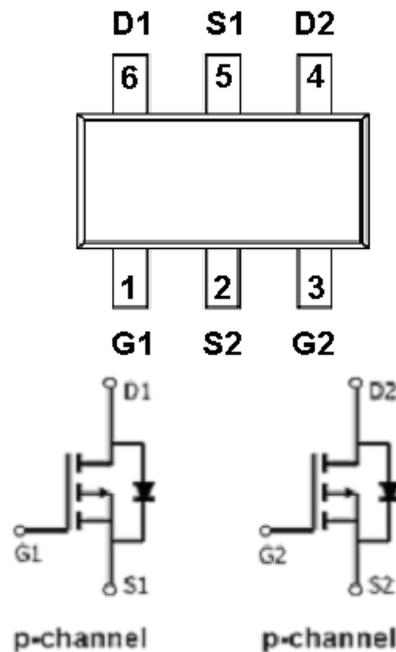
FEATURES

- ◆ P-Channel
-30V/-2.8A, $R_{DS(ON)}=105m\Omega@V_{GS}=-10V$
-30V/-2.5A, $R_{DS(ON)}=135m\Omega@V_{GS}=-4.5V$
- ◆ Super high density cell design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and maximum DC current capability
- ◆ SOT-23-6L package design

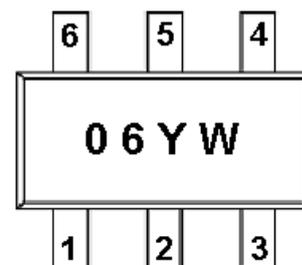
APPLICATIONS

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

PIN CONFIGURATION(SOT-23-6L)



PART MARKING



Y : Year Code
W : Week Code



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PIN DESCRIPTION

Pin	Symbol	Description
1	G1	Gate 1
2	S2	Source 2
3	G2	Gate 2
4	D2	Drain 2
5	S1	Source 1
6	D1	Drain1

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP6506S26RGB	SOT-23-6L	06

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

※ SPP6506S26RGB : 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)	I _D	TA=25°C	-2.8
		TA=70°C	-2.1
Pulsed Drain Current	I _{DM}	-8	A
Continuous Source Current(Diode Conduction)	I _S	-1.4	A
Power Dissipation	P _D	TA=25°C	1.15
		TA=70°C	0.75
Operating Junction Temperature	T _J	-55/150	°C
Storage Temperature Range	T _{STG}	-55/150	°C
Thermal Resistance-Junction to Ambient	R _{θJA}	T ≤ 10sec	52
		Steady State	90



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ELECTRICAL CHARACTERISTICS

(TA=25°C Unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_{D}=-250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_{D}=-250\mu A$	-1.0		-3.0	
Gate Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$			-1	uA
		$V_{DS}=-24V, V_{GS}=0V$ $T_J=55^{\circ}C$			-10	
On-State Drain Current	$I_{D(on)}$	$V_{DS} \leq -5V, V_{GS}=-10V$	-6			A
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_{D}=-2.8A$		0.088	0.105	Ω
		$V_{GS}=-4.5V, I_{D}=-2.5A$		0.118	0.135	
Forward Transconductance	g_{fs}	$V_{DS}=-10V, I_{D}=-2.8A$		4.0		S
Diode Forward Voltage	V_{SD}	$I_S=-1.2A, V_{GS}=0V$		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS}=-15V, V_{GS}=-10V$ $I_{D}=-1.7A$		5.8	10	nC
Gate-Source Charge	Q_{gs}			0.8		
Gate-Drain Charge	Q_{gd}			1.5		
Input Capacitance	C_{iss}	$V_{DS}=-15V, V_{GS}=0V$ $f=1MHz$		226		pF
Output Capacitance	C_{oss}			87		
Reverse Transfer Capacitance	C_{rss}			19		
Turn-On Time	$t_{d(on)}$	$V_{DD}=-15V, R_L=15\Omega$ $I_{D}=-1.0A, V_{GEN}=-10V$ $R_G=6\Omega$		9	20	nS
	t_r			9	20	
Turn-Off Time	$t_{d(off)}$			18	35	
	t_f			6	20	

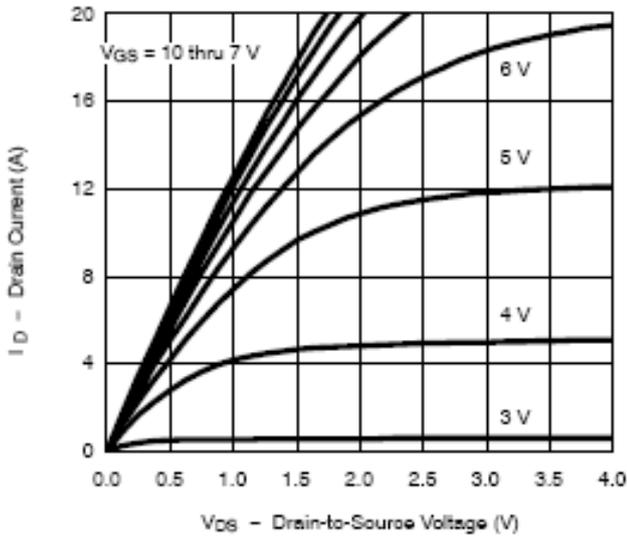


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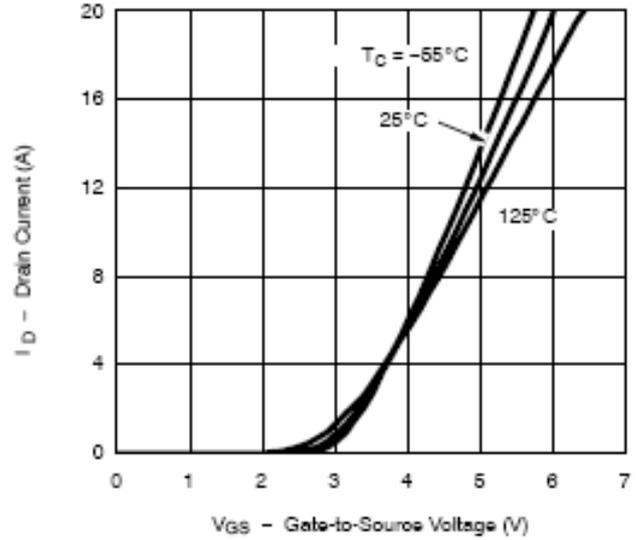
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TYPICAL CHARACTERISTICS

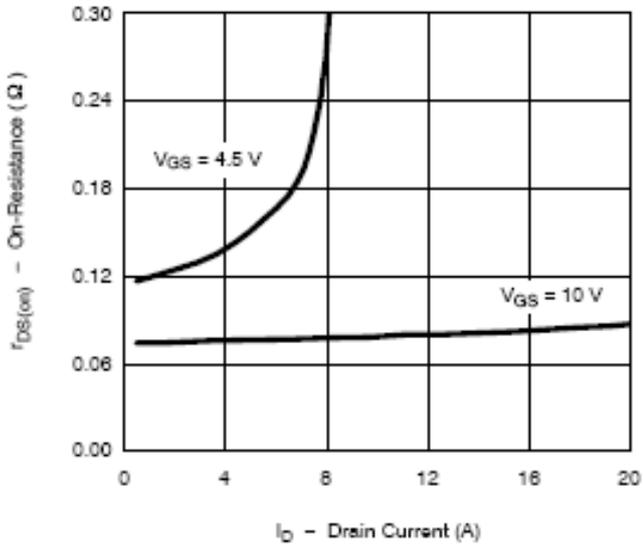
Output Characteristics



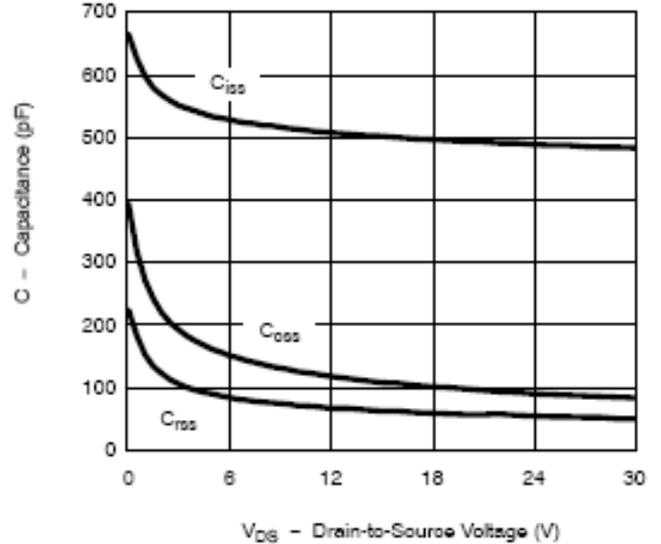
Transfer Characteristics



On-Resistance vs. Drain Current



Capacitance

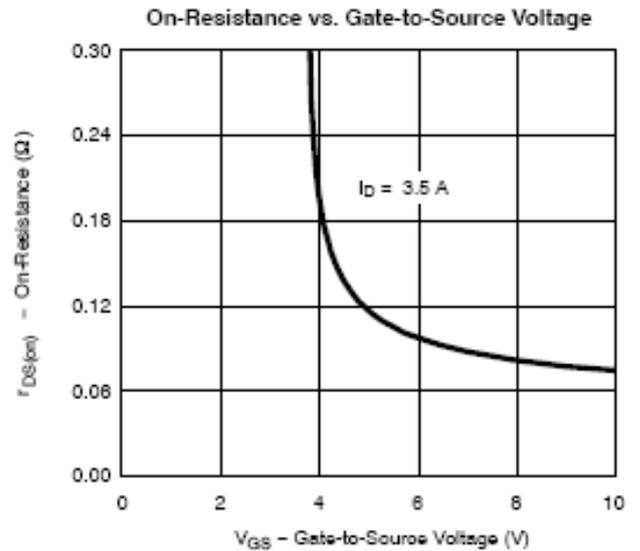
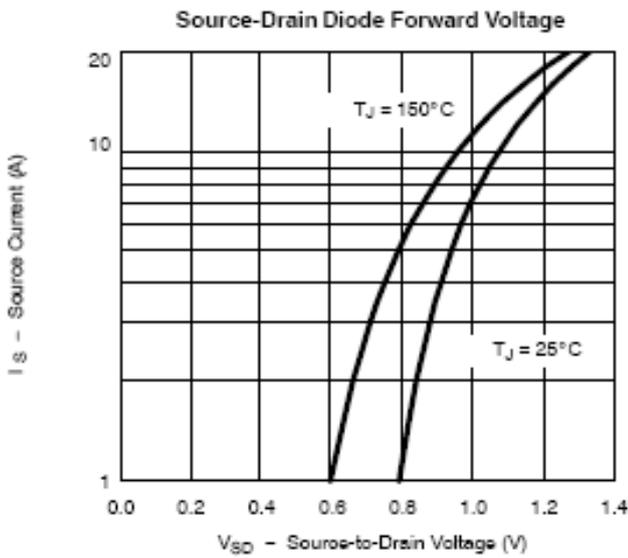
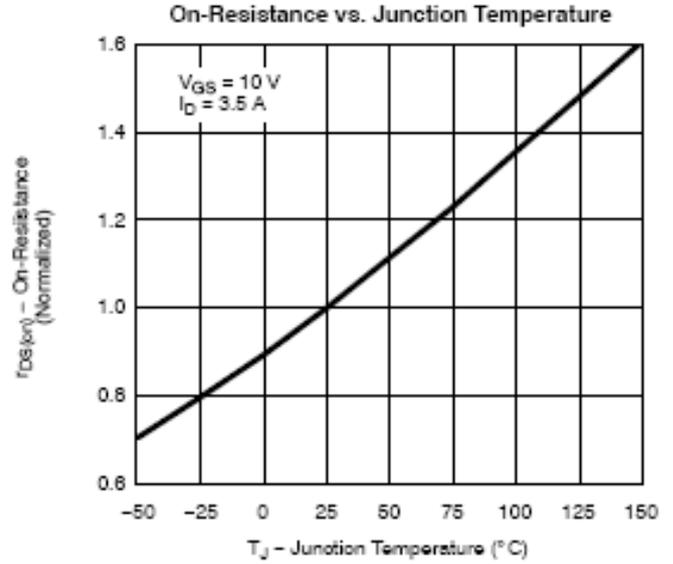
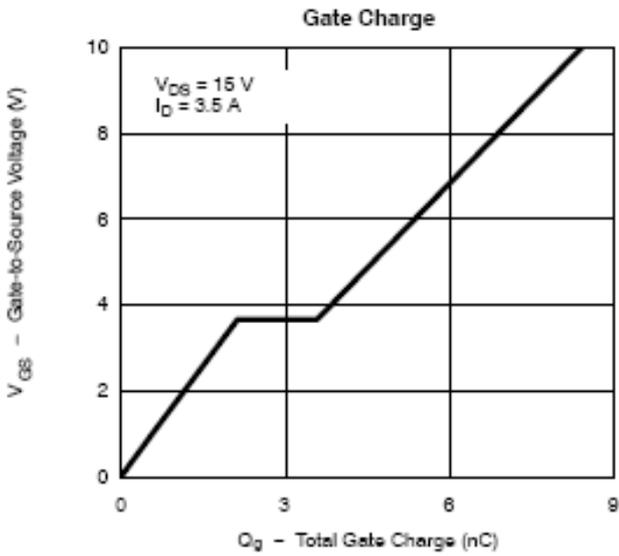




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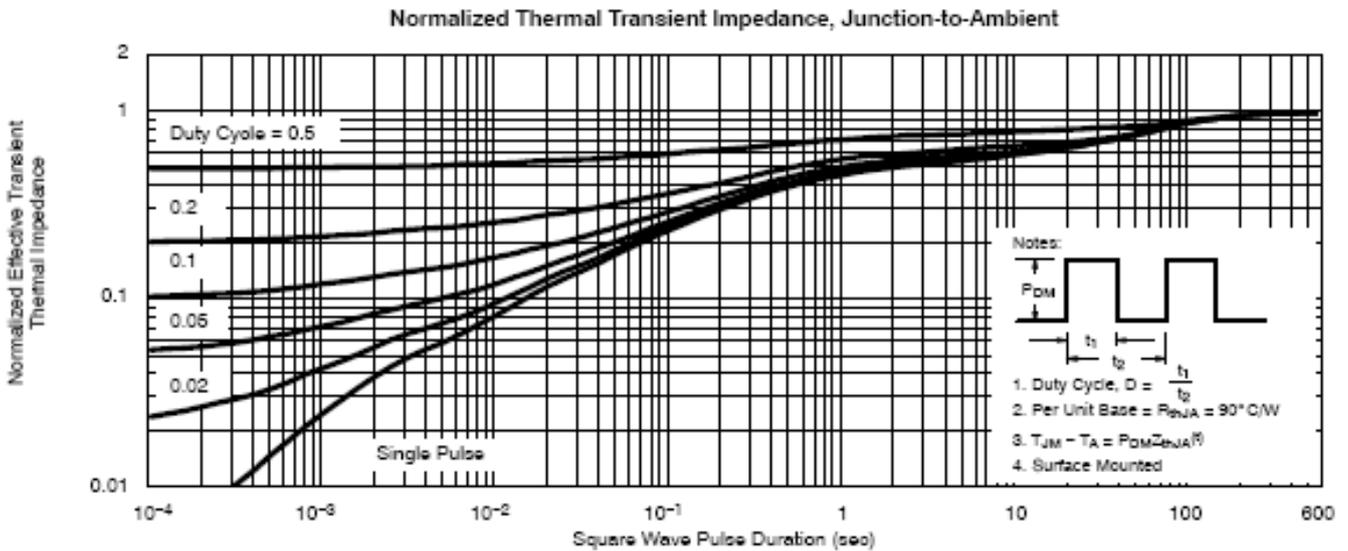
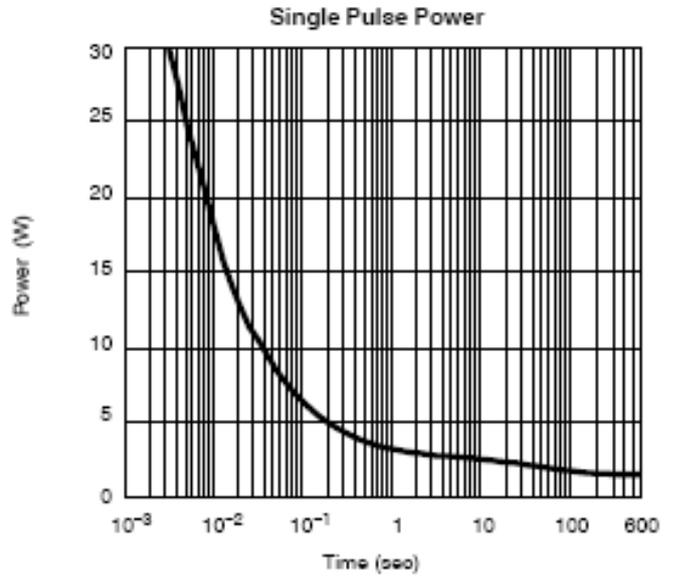
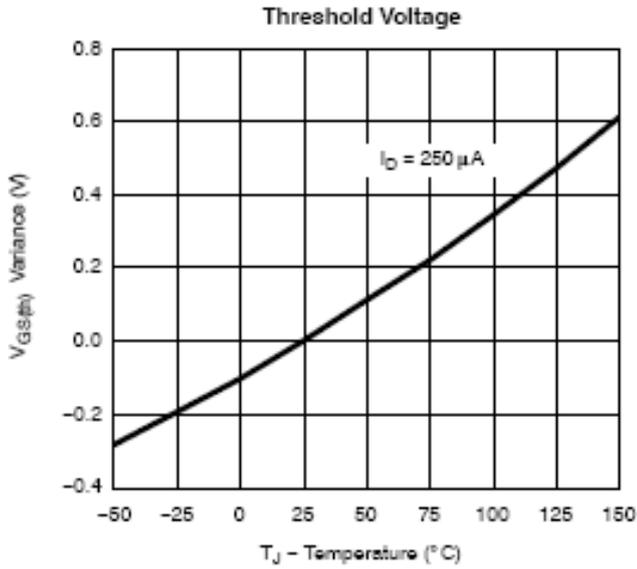




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TYPICAL CHARACTERISTICS





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