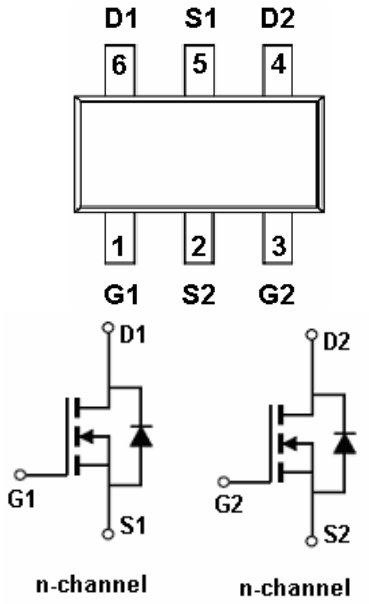
SPN2620
Dual N-Channel Enhancement Mode MOSFET

DESCRIPTION
The SPN2620 is the Dual N-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 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.

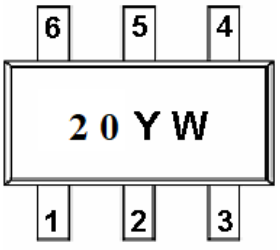
APPLICATIONS
- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

FEATURES
- 20V/4.0A,$R_{DS(ON)}$=26mΩ@VGS=4.5V
- 20V/3.0A,$R_{DS(ON)}$=35mΩ@VGS=2.5V
- 20V/2.0A,$R_{DS(ON)}$=50mΩ@VGS=1.8V
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- SOT-23-6L package design

PIN CONFIGURATION(SOT-23-6L)



PART MARKING



Y : Year Code
W : Week Code

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
SPN2620S26RGB	SOT-23-6L	20

※ Week Code : A ~ Z(1 ~ 26) ; a ~ z(27 ~ 52)
※ SPN2620S26RGB : Tape Reel ; Pb – Free; Halogen – Free

ABSOULTE MAXIMUM RATINGS
(T_A=25℃ Unless otherwise noted)

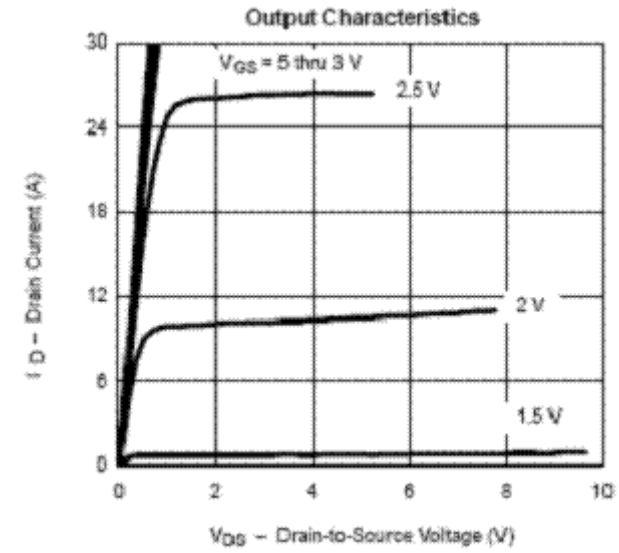
Parameter		Symbol	Typical	Unit
Drain-Source Voltage		V_{DSS}	20	V
Gate –Source Voltage		V_{GSS}	±12	V
Continuous Drain Current(T_J=150°C)	T_A=25°C	I_D	4.5	A
	T_A=70°C		4.0	
Pulsed Drain Current		I_{DM}	20	A
Continuous Source Current(Diode Conduction)		I_S	1.6	A
Power Dissipation	T_A=25°C	P_D	1.25	W
	T_A=70°C		0.8	
Operating Junction Temperature		T_J	-55/150	℃
Storage Temperature Range		T_{STG}	-55/150	℃
Thermal Resistance-Junction to Ambient		$R_{\theta JA}$	105	℃/W

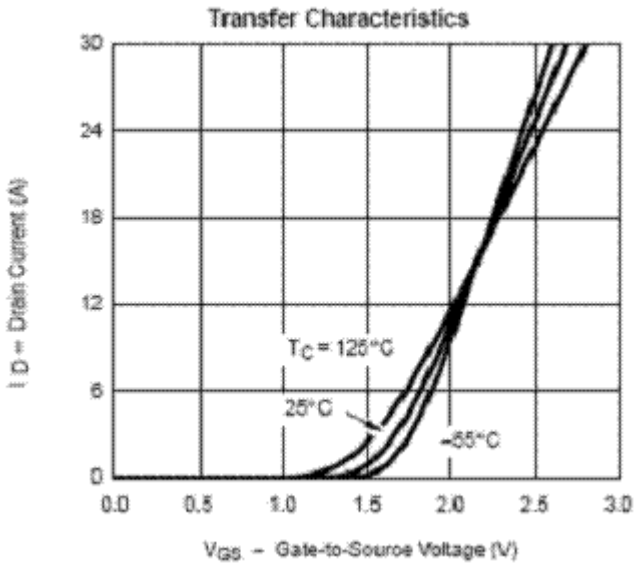
ELECTRICAL CHARACTERISTICS

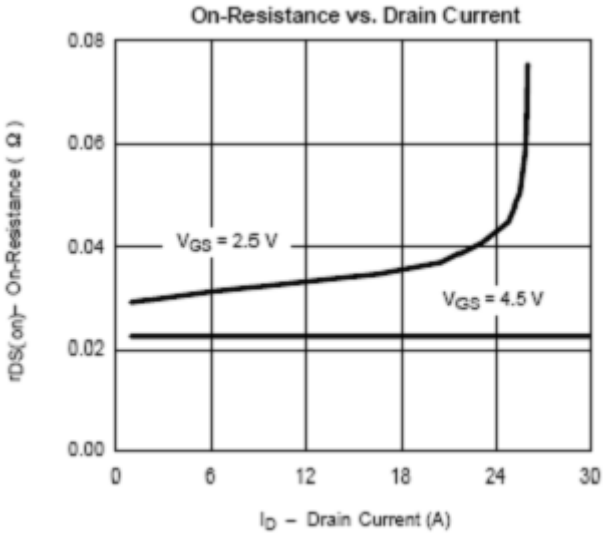
(T_A=25℃ Unless otherwise noted)

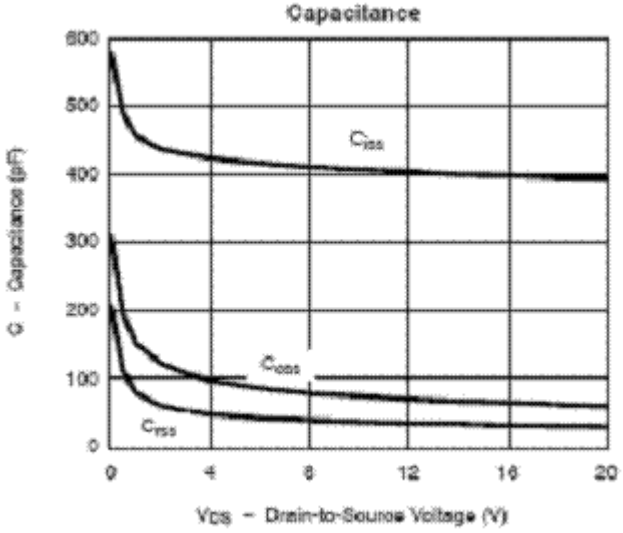
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V,I_D=250uA	20			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=250uA	0.4		1.0	
Gate Leakage Current	I_{GSS}	V_{DS}=0V,V_{GS}=±12V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=16V,V_{GS}=0V			1	uA
		V_{DS}=16V,V_{GS}=0V T_J=55℃			10	
On-State Drain Current	$I_{D(on)}$	V_{DS}≦4.5V,V_{GS}=5V	15			A
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=4.5V,I_D=4.0A			26	mΩ
		V_{GS}=2.5V,I_D=3.0A			35	
		V_{GS}=1.8V,I_D=2.0A			50	
Forward Transconductance	gfs	V_{DS}=5V,I_D=-3.5A		10		S
Diode Forward Voltage	V_{SD}	I_S=1.0A,V_{GS}=0V			1.0	V
Dynamic						
Total Gate Charge	Q_g	V_{DS}=15V,V_{GS}=4.5V I_D=4.0A		8.6		nC
Gate-Source Charge	Q_{gs}			1.37		
Gate-Drain Charge	Q_{gd}			2.3		
Input Capacitance	C_{iss}	V_{DS}=8V,V_{GS}=0V f=1MHz		575		pF
Output Capacitance	C_{oss}			84		
Reverse Transfer Capacitance	C_{rss}			22		
Turn-On Time	$t_{d(on)}$	V_{DD}=10V,I_D=3.0A, V_{GEN}=4.5V R_G=3.3Ω		5.2		nS
	t_r			34		
Turn-Off Time	$t_{d(off)}$			23		
	t_f			9.2		

TYPICAL CHARACTERISTICS









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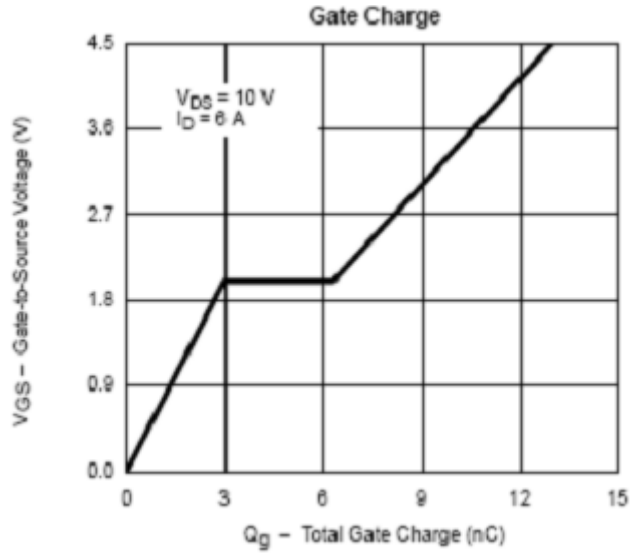

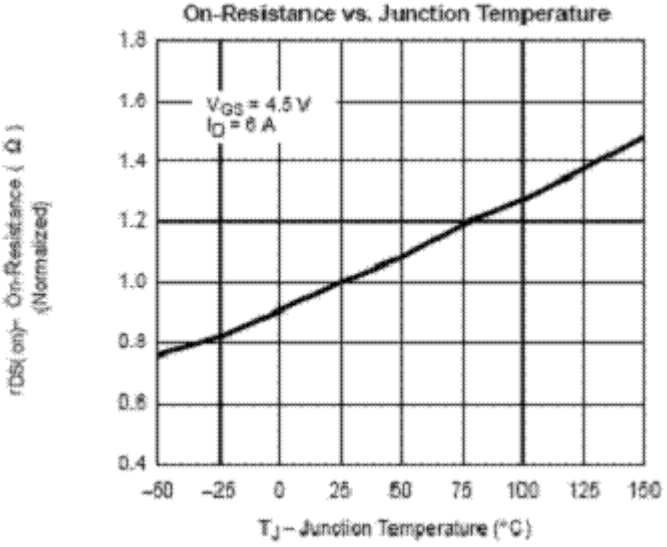

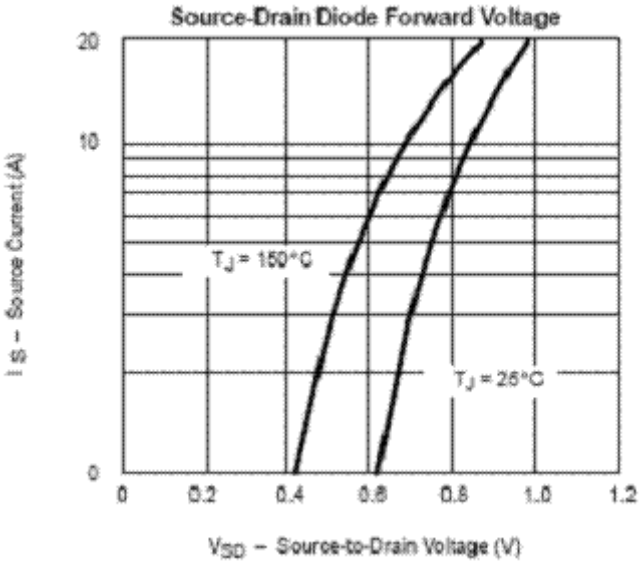

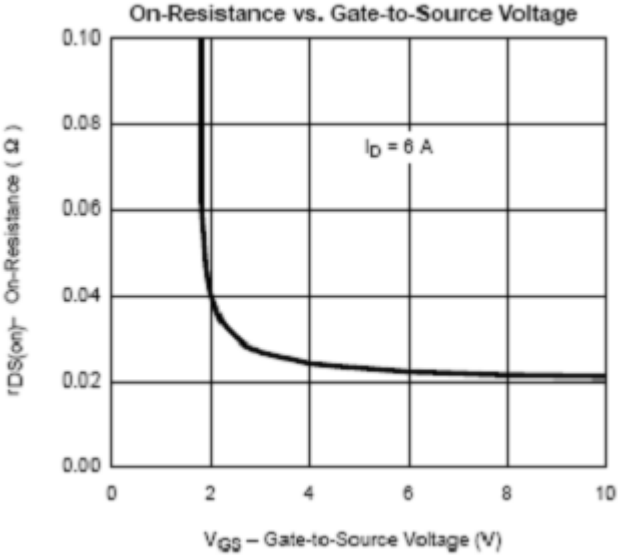

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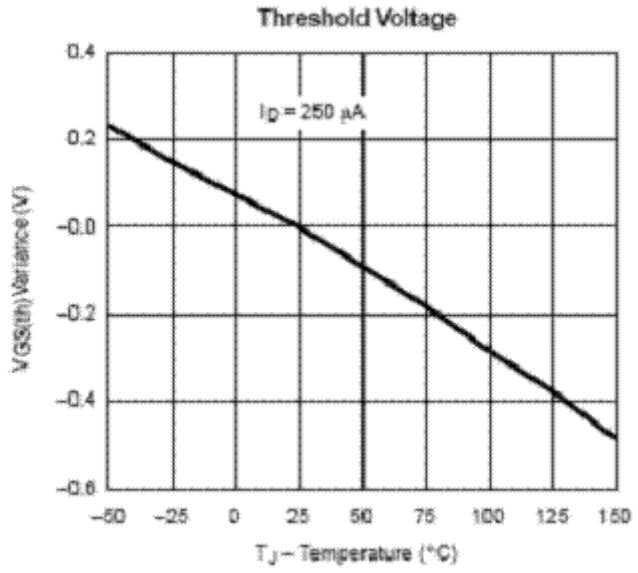

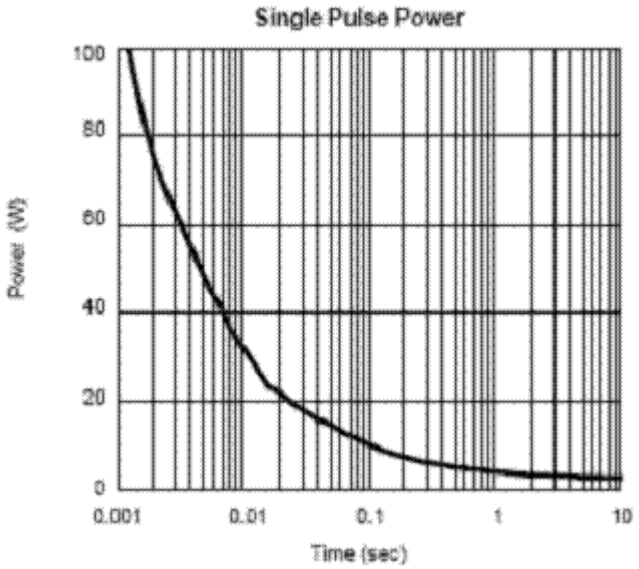

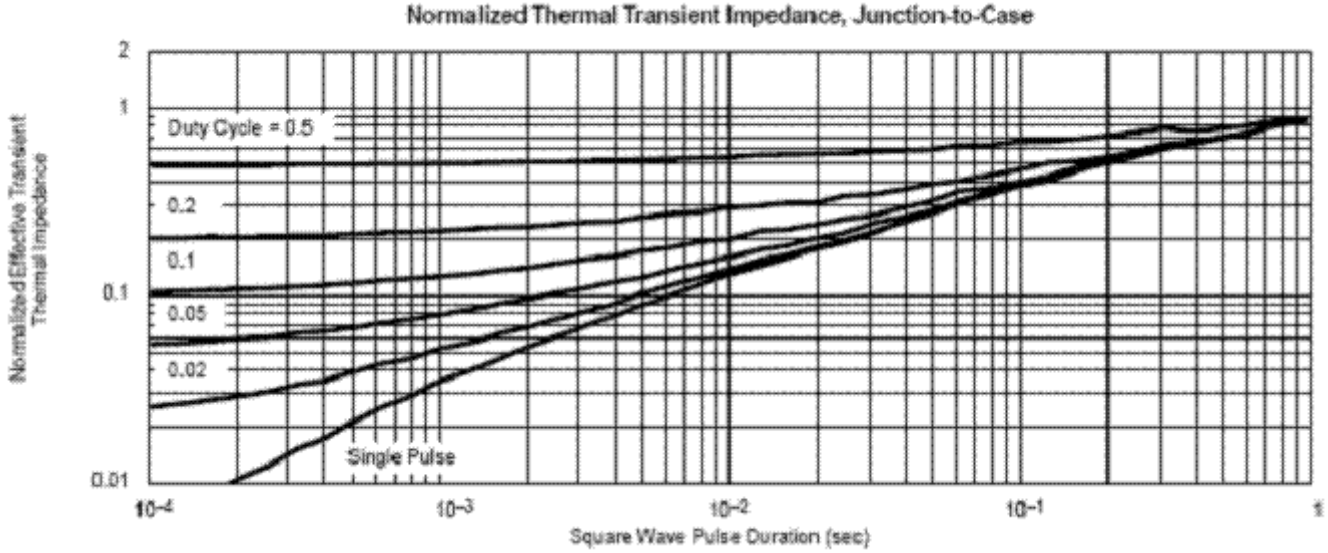

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