

SPP3403

DESCRIPTION

The SPP3403 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 where high-side switching , and low in-line power loss are needed in a very small outline surface mount package.

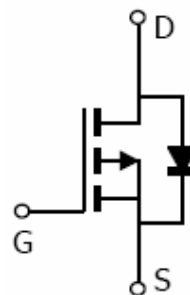
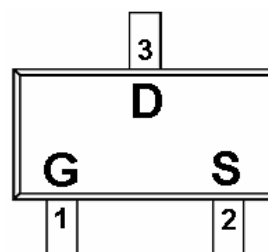
FEATURES

- ◆ -30V/-2.8A, $R_{DS(ON)}=100m\Omega@V_{GS}=-10V$
- ◆ -30V/-2.5A, $R_{DS(ON)}=110m\Omega@V_{GS}=-4.5V$
- ◆ -30V/-1.5A, $R_{DS(ON)}=145m\Omega@V_{GS}=-2.5V$
- ◆ -30V/-1.0A, $R_{DS(ON)}=200m\Omega@V_{GS}=-1.8V$
- ◆ Super high density cell design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and maximum DC current capability
- ◆ SOT-23-3L package design

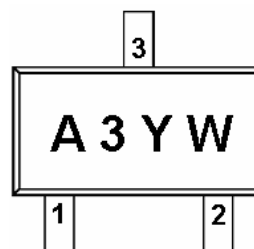
APPLICATIONS

- 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

SPP3403

PIN DESCRIPTION

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

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP3403S23RG	SOT-23-3L	A3YW

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

※ SPP3403S23RG : Tape Reel ; Pb – 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}	±12	V
Continuous Drain Current(T _J =150°C)	I _D	-3.5	A
		-2.8	
Pulsed Drain Current	I _{DM}	-20	A
Continuous Source Current(Diode Conduction)	I _S	-1.4	A
Power Dissipation	P _D	1.25	W
		0.81	
Operating Junction Temperature	T _J	-55/150	°C
Storage Temperature Range	T _{STG}	-55/150	°C
Thermal Resistance-Junction to Ambient	R _{θJA}	105	°C/W

SPP3403

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	-30			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} =-24V, V _{GS} =0V			-1	uA
		V _{DS} =-24V, V _{GS} =0V T _J =85°C			-5	
On-State Drain Current	I _{D(on)}	V _{DS} = -5V, V _{GS} = -4.5V	-4			A
Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-2.8A		0.080	0.100	Ω
		V _{GS} =-4.5V, I _D =-2.5A		0.100	0.110	
		V _{GS} =-2.5V, I _D =-1.5A		0.130	0.145	
		V _{GS} =-1.8V, I _D =-1.0A		0.160	0.200	
Forward Transconductance	g _{fs}	V _{DS} =-10V, I _D =-2.8A		4		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} =-4.5V I _D =-2.0A		5.8		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		380		pF
Output Capacitance	C _{oss}			55		
Reverse Transfer Capacitance	C _{rss}			40		
Turn-On Time	t _{d(on)}	V _{DD} =-15V, R _L =15Ω I _D =-1.0A, V _{GEN} =-10V R _G =3Ω		6		ns
	t _r			3.9		
Turn-Off Time	t _{d(off)}			40		
	t _f			15		