



SPP3481B

P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP3481B 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.

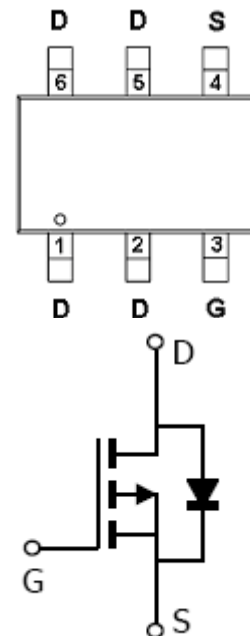
FEATURES

- ◆ -30V/-5.2A, $R_{DS(ON)}=70m\Omega@V_{GS}=-10V$
- ◆ -30V/-4.2A, $R_{DS(ON)}=95m\Omega@V_{GS}=-4.5V$
- ◆ Super high density cell design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and maximum DC current capability
- ◆ SOT-23-6P package design

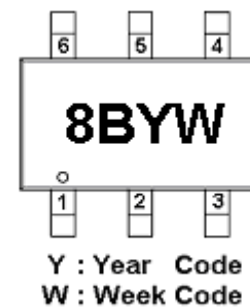
APPLICATIONS

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

PIN CONFIGURATION(SOT-23-6P)



PART MARKING





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PIN DESCRIPTION

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

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP3481BS26RGB	SOT-23-6P	8BYW

- ※ Week Code : A ~ Z (1 ~ 26) ; a ~ z (27 ~ 52)
- ※ SPP3481BS26RGB : 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	-5.2	A
		TA=70°C	-4.2	
Pulsed Drain Current	I _{DM}	-20	A	
Continuous Source Current(Diode Conduction)	I _S	-1.7	A	
Power Dissipation	P _D	TA=25°C	2.0	W
		TA=70°C	1.3	
Operating Junction Temperature	T _J	150	°C	
Storage Temperature Range	T _{STG}	-55/150	°C	
Thermal Resistance-Junction to Ambient	R _{θJA}	90	°C/W	



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ELECTRICAL CHARACTERISTICS

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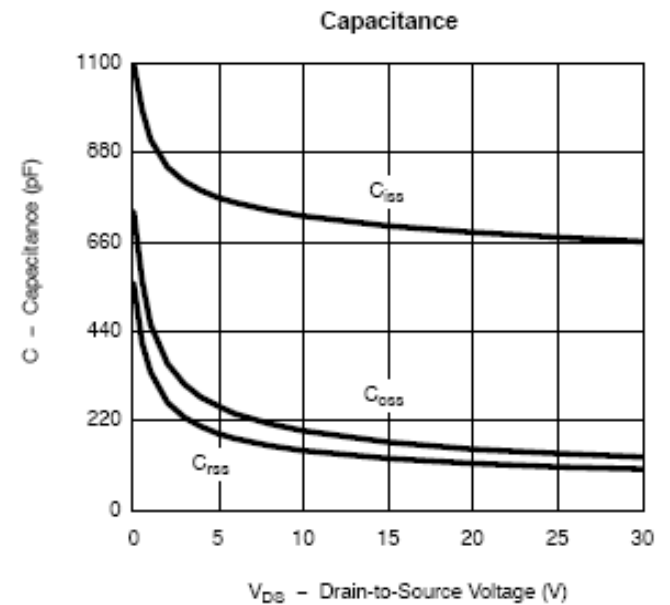
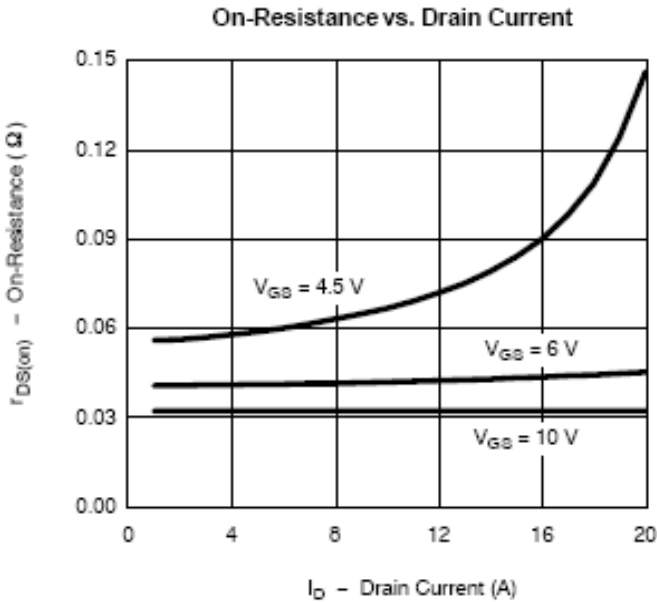
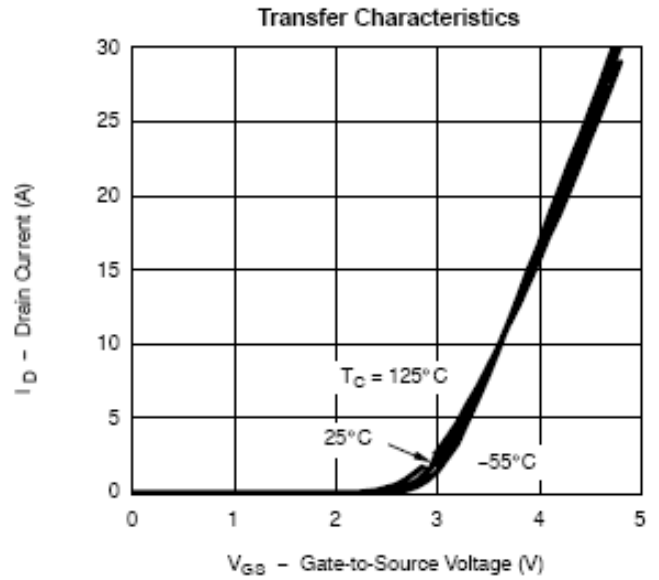
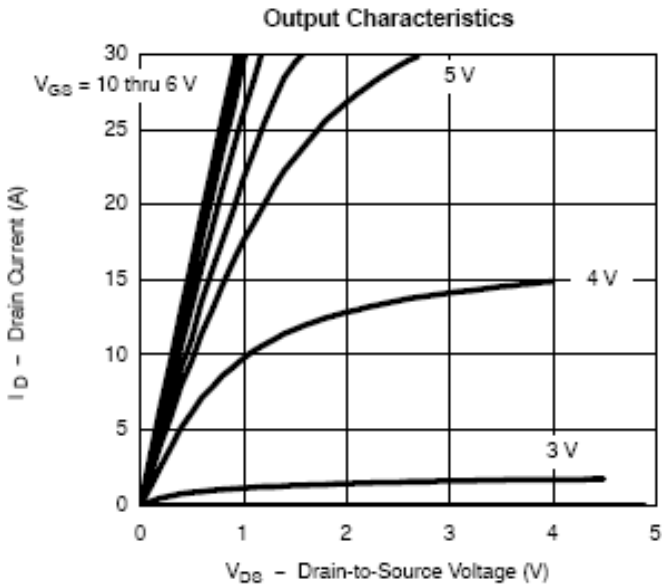
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250uA	-30			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250uA	-0.8		-2.5	
Gate Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-24V, V _{GS} =0V			-1	uA
		V _{DS} =-24V, V _{GS} =0V T _J =55°C			-10	
On-State Drain Current	I _{D(on)}	V _{DS} ≤ -5V, V _{GS} =-10V	-10			A
Drain-Source On-Resistance	R _{DSS(on)}	V _{GS} =-10V, I _D =-5.2A		0.062	0.070	Ω
		V _{GS} =-4.5V, I _D =-4.2A		0.085	0.095	
Forward Transconductance	g _{fs}	V _{DS} =-5.0V, I _D =-4.0A		10		S
Diode Forward Voltage	V _{SD}	I _S =-1.0A, V _{GS} =0V		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q _g	V _{DS} =-15V, V _{GS} =-10V I _D = -3.5A		10	18	nC
Gate-Source Charge	Q _{gs}			1.6		
Gate-Drain Charge	Q _{gd}			3.0		
Input Capacitance	C _{iss}	V _{DS} =-15V, V _{GS} =0V f=1MHz		450		pF
Output Capacitance	C _{oss}			95		
Reverse Transfer Capacitance	C _{rss}			55		
Turn-On Time	t _{d(on)}	V _{DD} =-15V, R _L =15Ω I _D =-1.0A, V _{GEN} =-10V R _G =6Ω		8	18	nS
	t _r			8	18	
Turn-Off Time	t _{d(off)}			25	50	
	t _f			25	35	



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TYPICAL CHARACTERISTICS

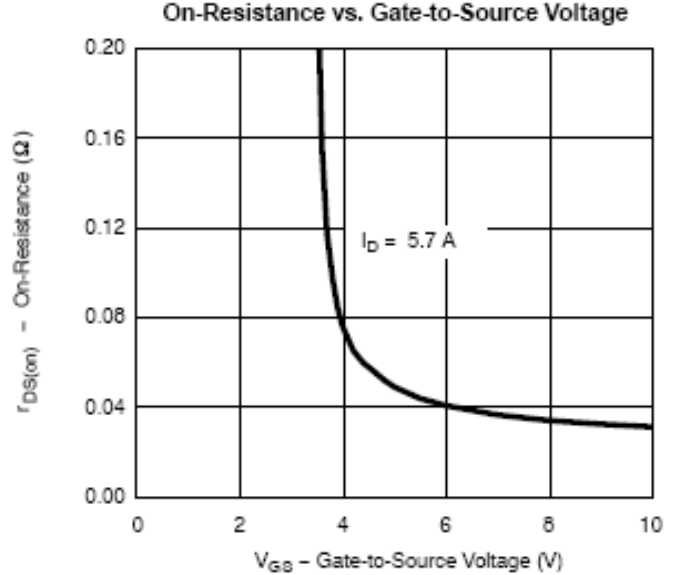
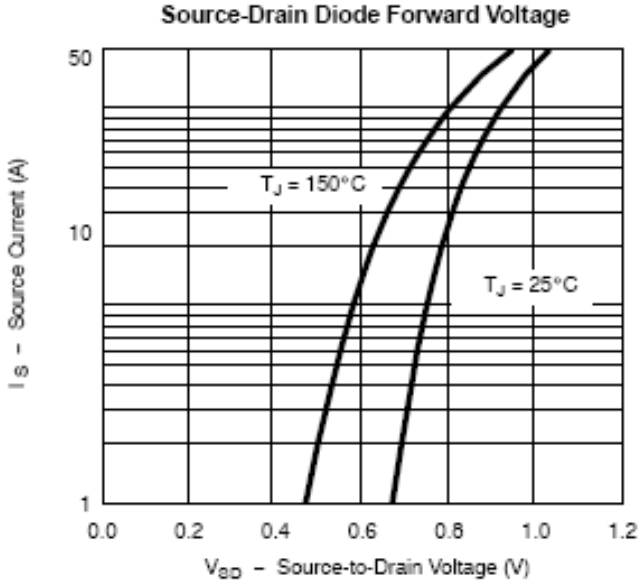
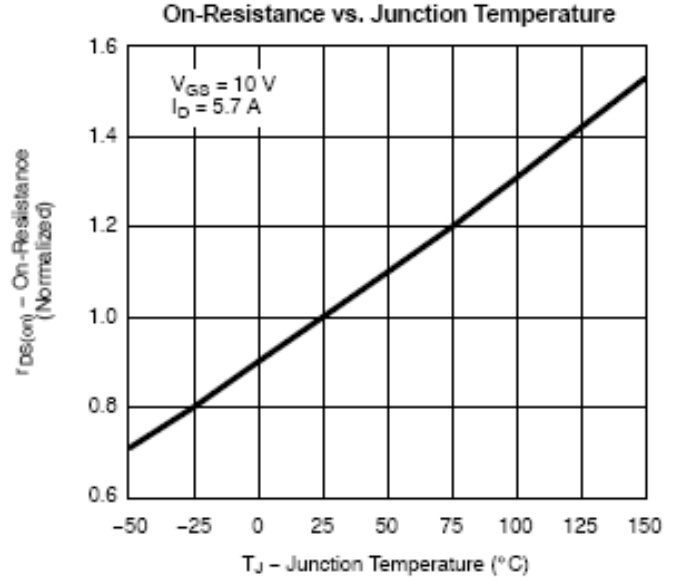
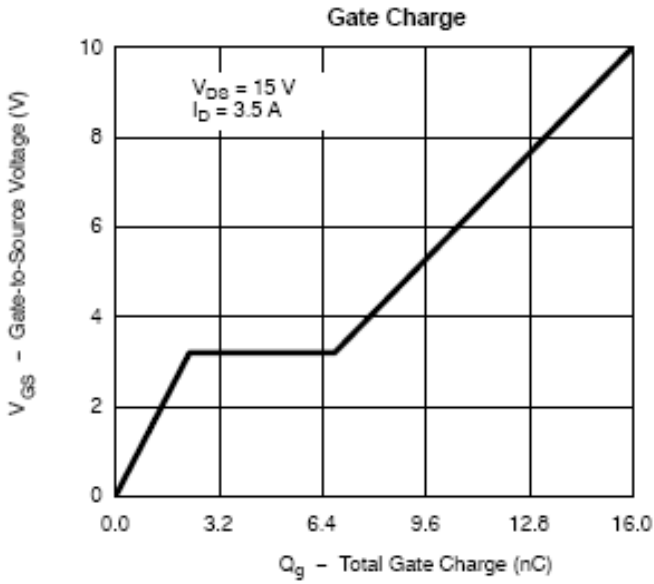




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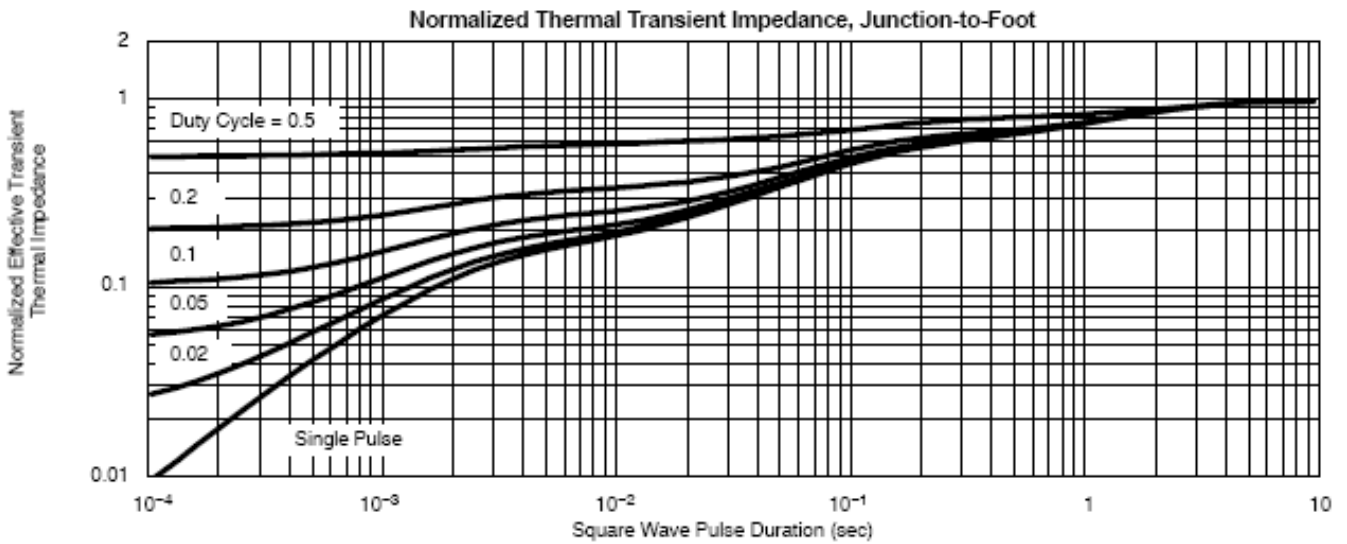
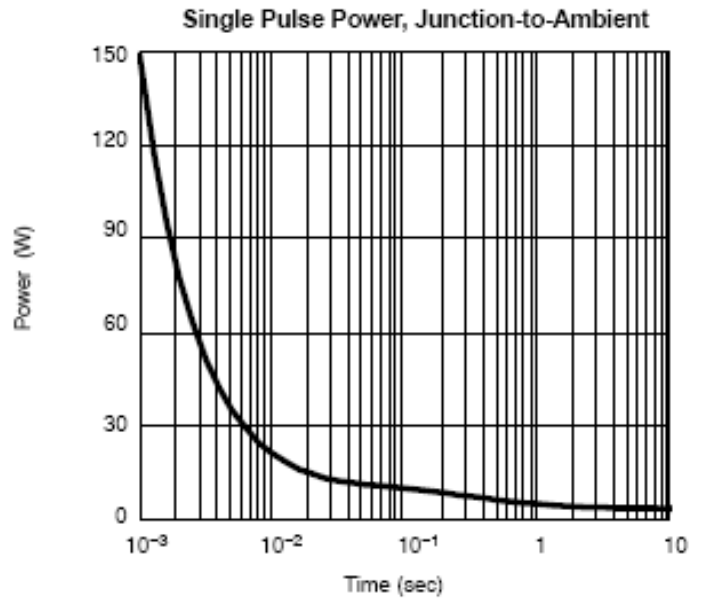
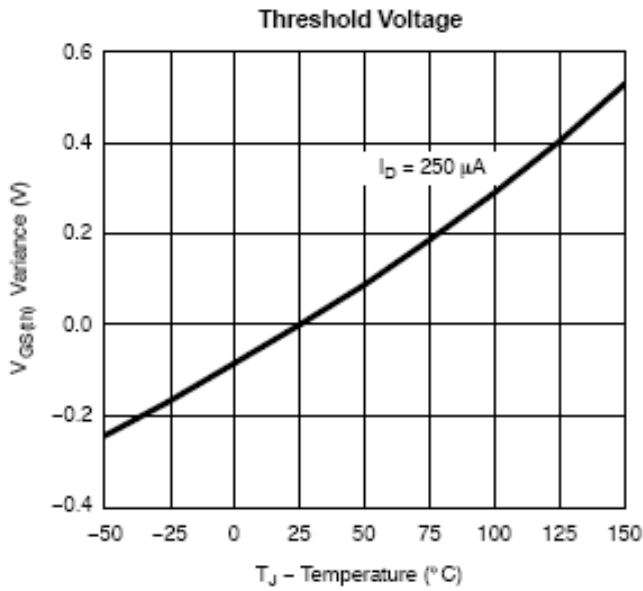




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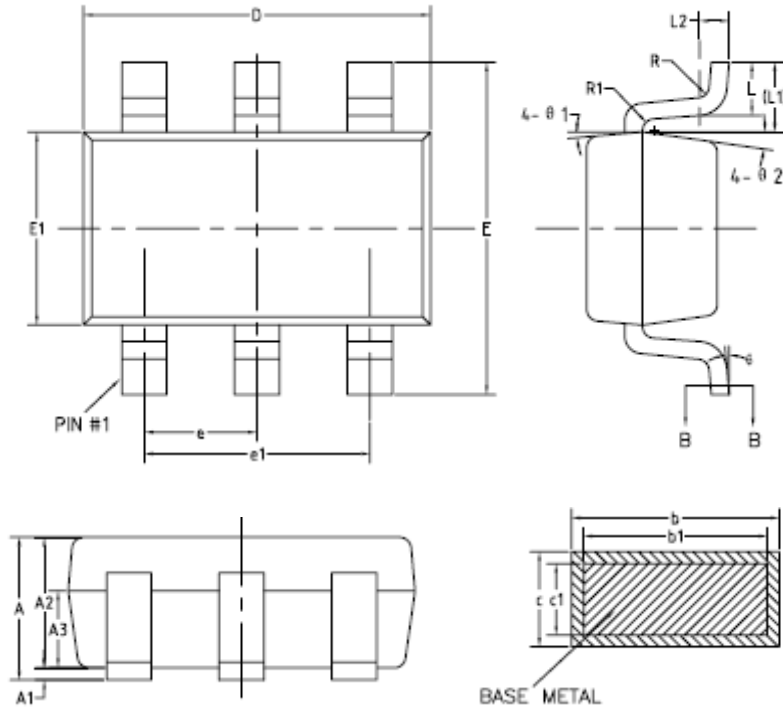




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SOT-23-6L PACKAGE OUTLINE



COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	NOM	MAX
A	—	—	1.45
A1	0	—	0.15
A2	0.90	1.10	1.30
A3	0.60	0.65	0.70
b	0.39	—	0.49
b1	0.38	0.40	0.45
c	0.12	—	0.19
c1	0.11	0.13	0.15
D	2.85	2.95	3.05
E	2.60	2.80	3.00
E1	1.55	1.65	1.75
e	0.85	0.95	1.05
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.59REF		
L2	0.25BSC		
R	0.05	—	—
R1	0.05	—	0.20
θ	0°	—	8°
$\theta 1$	8°	10°	12°
$\theta 2$	8°	10°	12°



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