SPP9435B
P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP9435B 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 , notebook computer power management and other battery powered circuits where high-side switching .

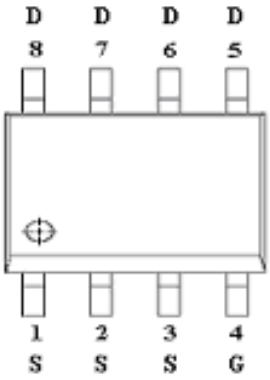
APPLICATIONS

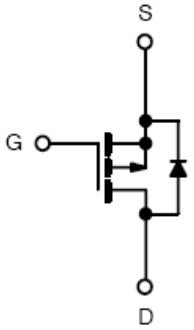
- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

FEATURES

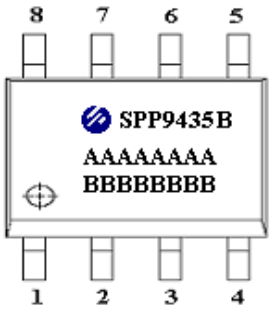
- -30V/-7.2A,$R_{DS(ON)}$= 65mΩ@V_{GS}=- 10V
- -30V/-5.0A,$R_{DS(ON)}$= 90mΩ@V_{GS}=-4.5V
- Super high density cell design for extremely low RDS (ON)
- Exceptional on-resistance and maximum DC current capability
- SOP – 8P package design

PIN CONFIGURATION(SOP – 8P)





PART MARKING



A : Lot Code
B : Date Code

SPP9435B
P-Channel Enhancement Mode MOSFET

PIN DESCRIPTION

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

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP9435BS8RGB	SOP- 8P	SPP9435B

※ SPP9435BS8RGB 13" Tape Reel ; Pb – Free ; Halogen – Free

ABSOULTE MAXIMUM RATINGS

(T_A=25℃ 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℃)	T_A=25℃	I_D	-7.2	A
	T_A=70℃		-5.0	
Pulsed Drain Current		I_{DM}	-25	A
Continuous Source Current(Diode Conduction)		I_S	-2.3	A
Power Dissipation	T_A=25℃	P_D	2.8	W
	T_A=70℃		1.8	
Operating Junction Temperature		T_J	-55/150	℃
Storage Temperature Range		T_{STG}	-55/150	℃
Thermal Resistance-Junction to Ambient		$R_{\theta JA}$	70	℃/W

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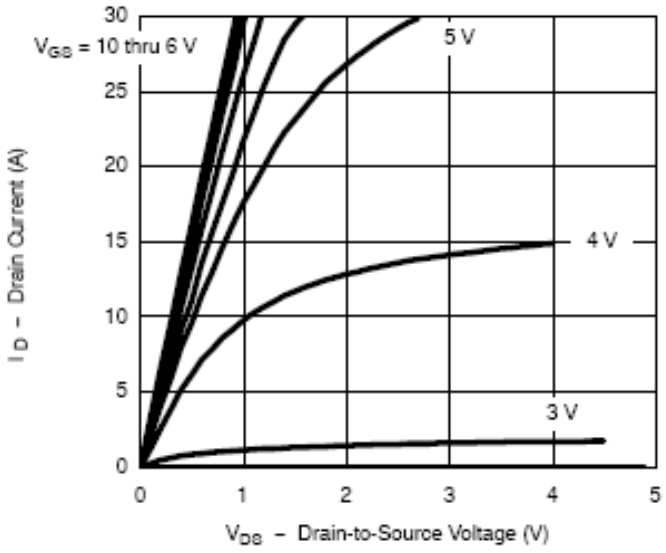
ELECTRICAL CHARACTERISTICS

(T_A=25℃ Unless otherwise noted)

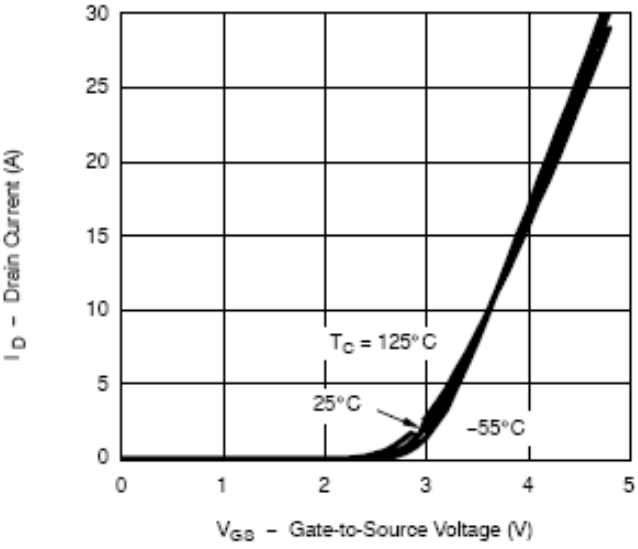
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V,I_D=-250uA	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=-250uA	-0.8		-2.5	
Gate Leakage Current	I_{GSS}	V_{DS}=0V,V_{GS}=±20V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-24V,V_{GS}=0V			-1	uA
		V_{DS}=-24V,V_{GS}=0V T_J=55℃			-5	
On-State Drain Current	$I_{D(on)}$	V_{DS}= -5V,V_{GS} =-4.5V	-10			A
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-10V,I_D=-7.2A		0.057	0.065	Ω
		V_{GS}=-4.5V,I_D=-5.0A		0.083	0.090	
Forward Transconductance	gfs	V_{DS}=-15V,I_D=-5.7A		13		S
Diode Forward Voltage	V_{SD}	I_S=-1.3A,V_{GS} =0V		-0.55	-1.0	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	

TYPICAL CHARACTERISTICS

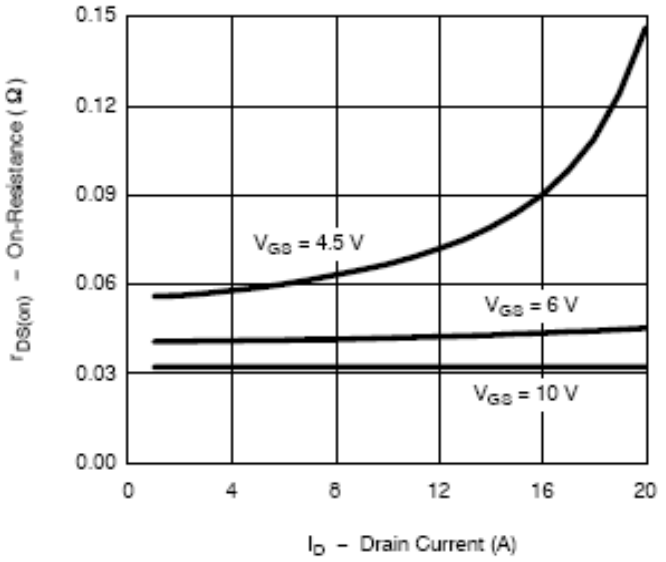
Output Characteristics



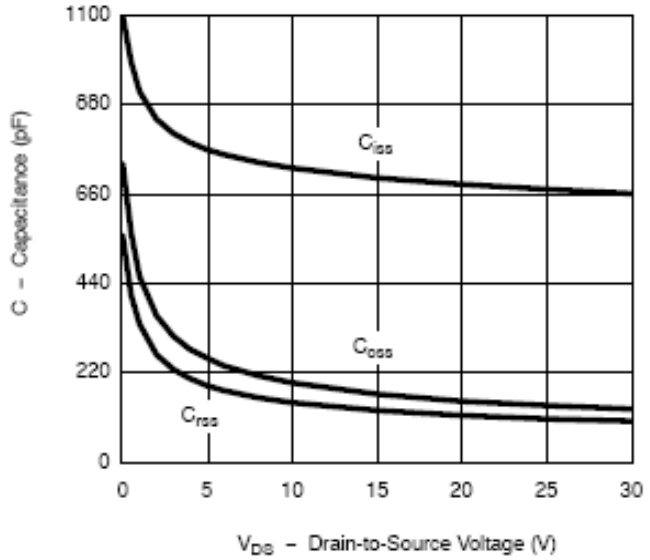
Transfer Characteristics



On-Resistance vs. Drain Current

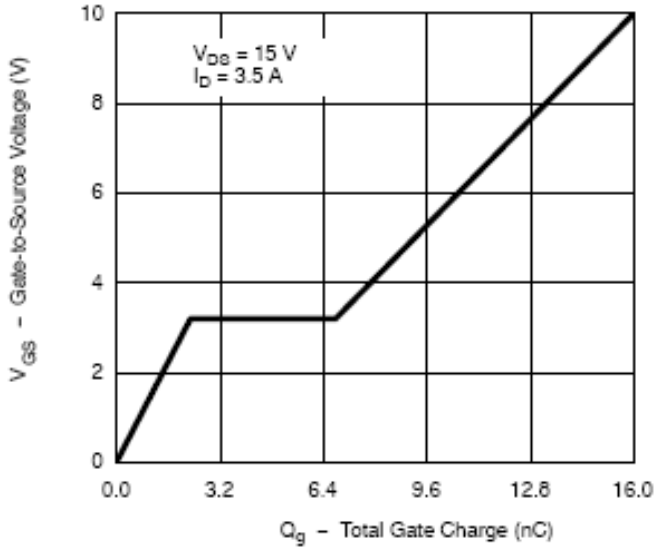


Capacitance

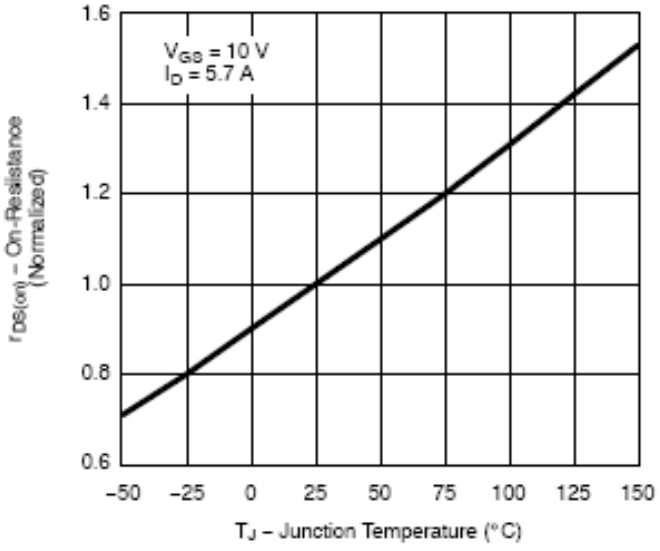


TYPICAL CHARACTERISTICS

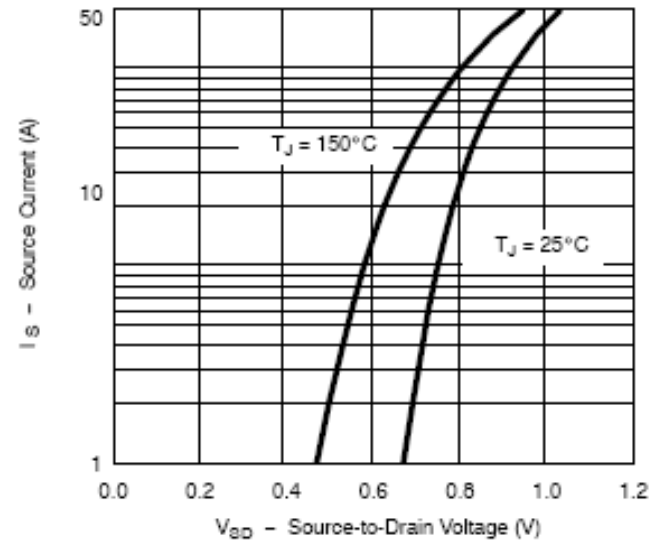
Gate Charge



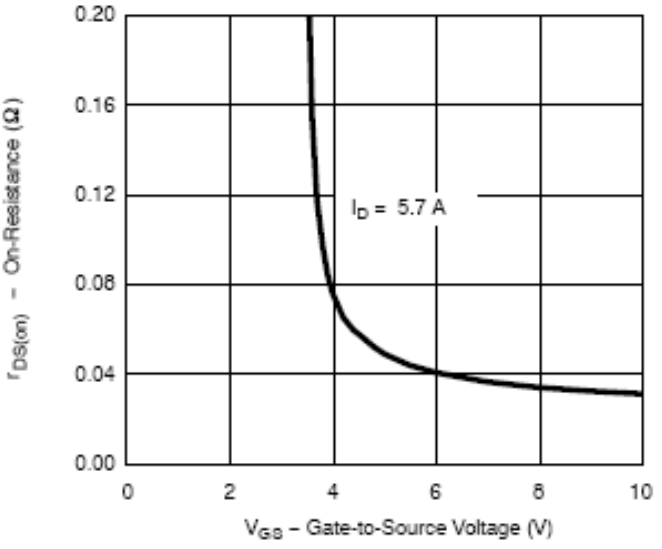
On-Resistance vs. Junction Temperature



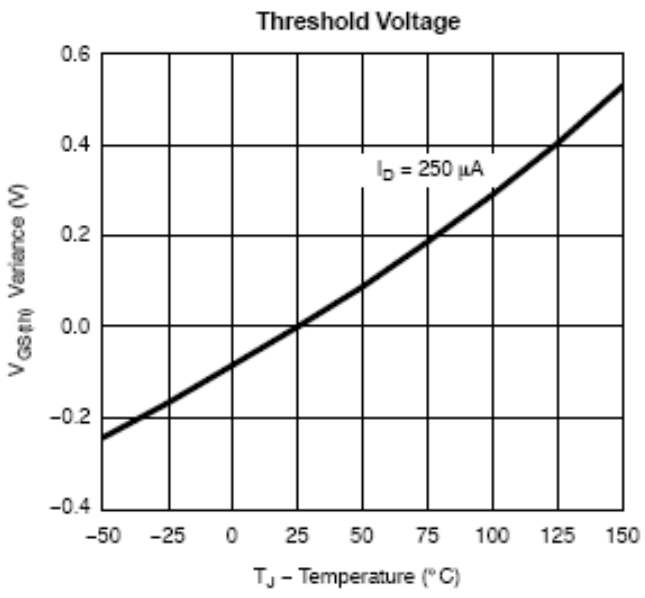
Source-Drain Diode Forward Voltage

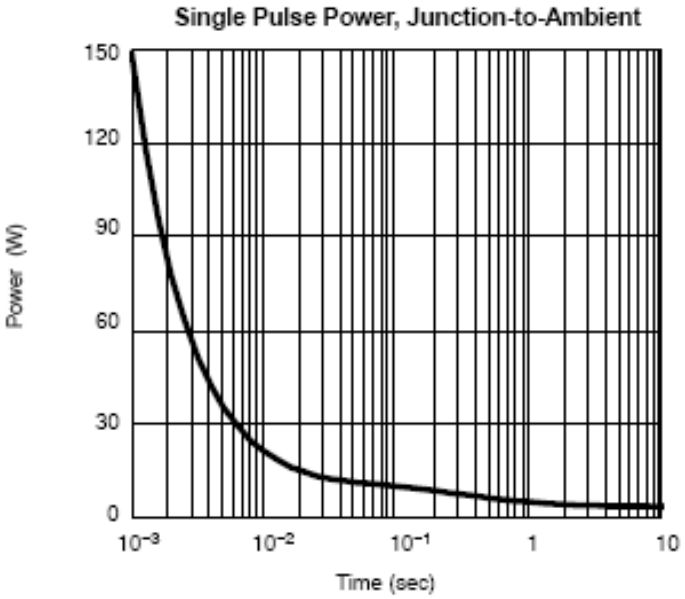


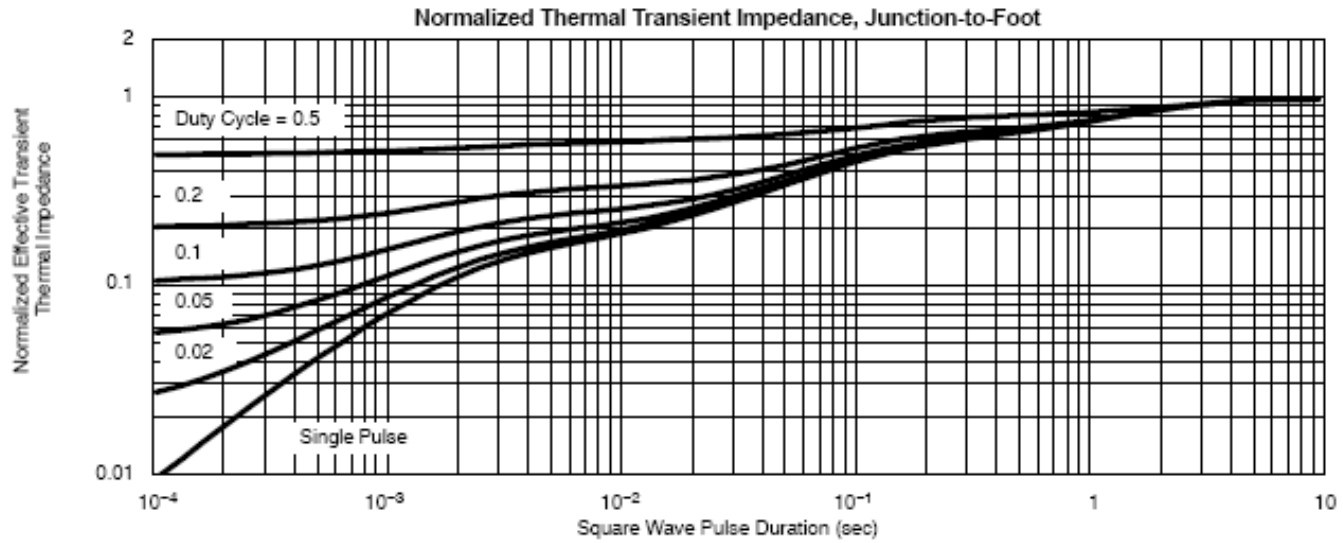
On-Resistance vs. Gate-to-Source Voltage



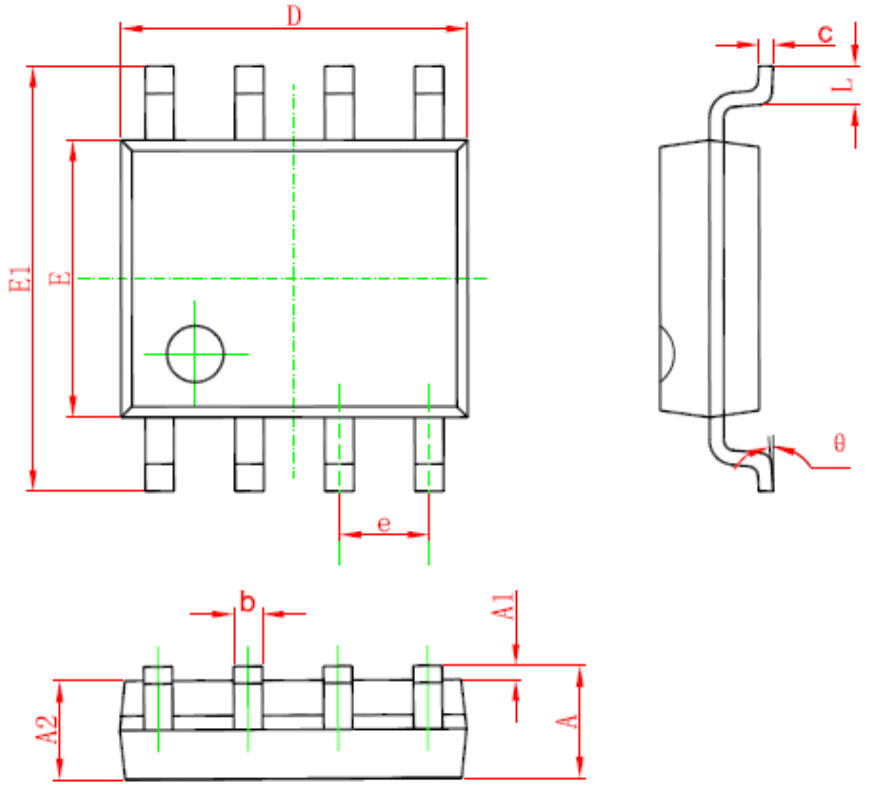
TYPICAL CHARACTERISTICS







SOP- 8 PACKAGE OUTLINE



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

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