



SPP1073

P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP1073 is the P-Channel enhancement mode power field effect transistors are produced using high cell density, D MOS 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 losses, and resistance to transients are needed.

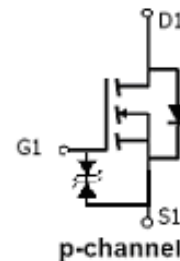
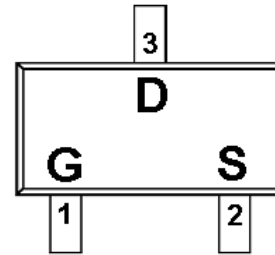
FEATURES

- ◆ P-Channel
 -20V/0.45A, $R_{DS(ON)} = 0.65\Omega @ V_{GS} = -4.5V$
 -20V/0.35A, $R_{DS(ON)} = 0.90\Omega @ V_{GS} = -2.5V$
 -20V/0.25A, $R_{DS(ON)} = 1.5\Omega @ V_{GS} = -1.8V$
- ◆ Super high density cell design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and maximum DC current capability
- ◆ SOT-723 package design

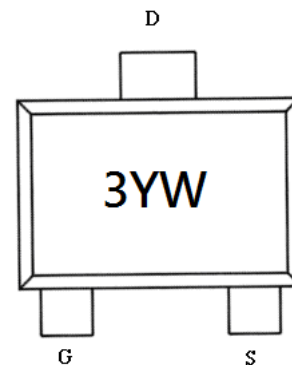
APPLICATIONS

- Drivers : Relays/Solenoids/Lamps/Hammers
- Power Supply Converter Circuits
- Load/Power Switching Cell Phones, Pagers

PIN CONFIGURATION(SOT-723)



PART MARKING





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PIN DESCRIPTION

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

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP1073S72RGB	SOT-723	3

※ SPP1073S72RGB : 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}	±12	V
Continuous Drain Current(T _J =150°C)	T _A =25°C	-0.45	A
	T _A =80°C	-0.35	
Pulsed Drain Current	I _{DM}	-1.0	A
Continuous Source Current(Diode Conduction)	I _S	-0.3	A
Power Dissipation	T _A =25°C	0.27	W
	T _A =70°C	0.16	
Operating Junction Temperature	T _J	-55/150	°C
Storage Temperature Range	T _{STG}	-55/150	°C



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ELECTRICAL CHARACTERISTICS

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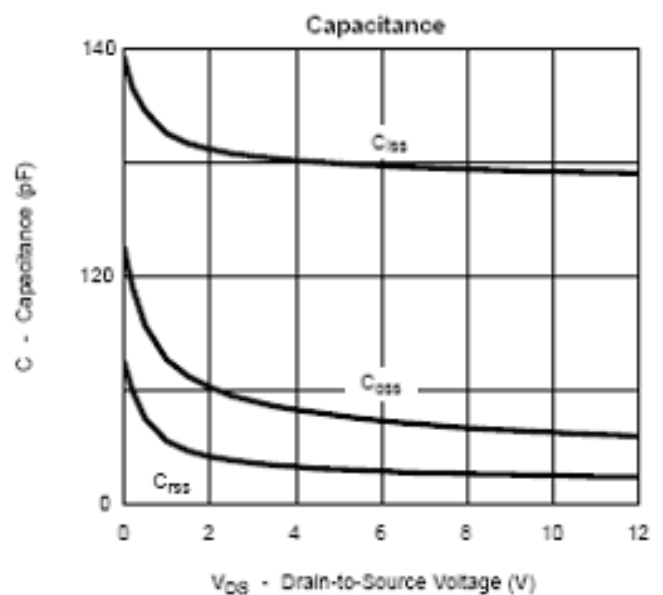
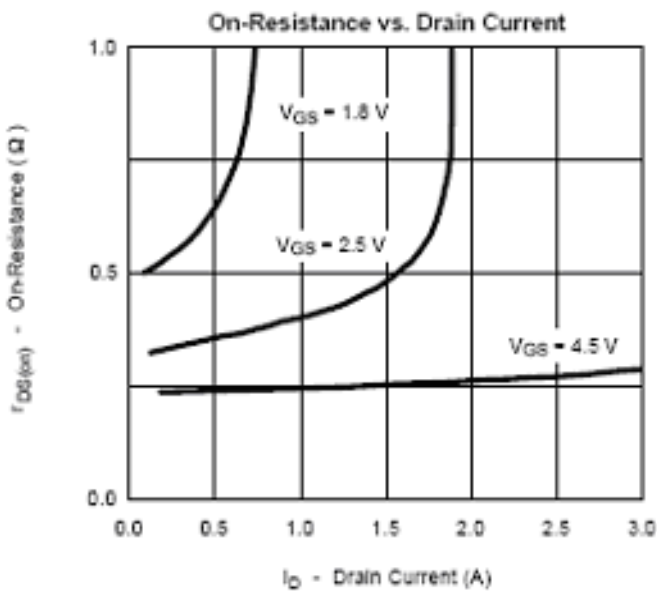
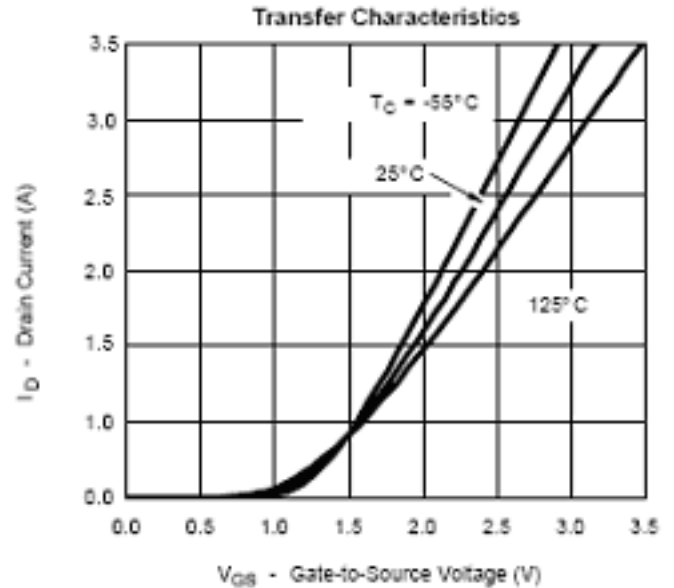
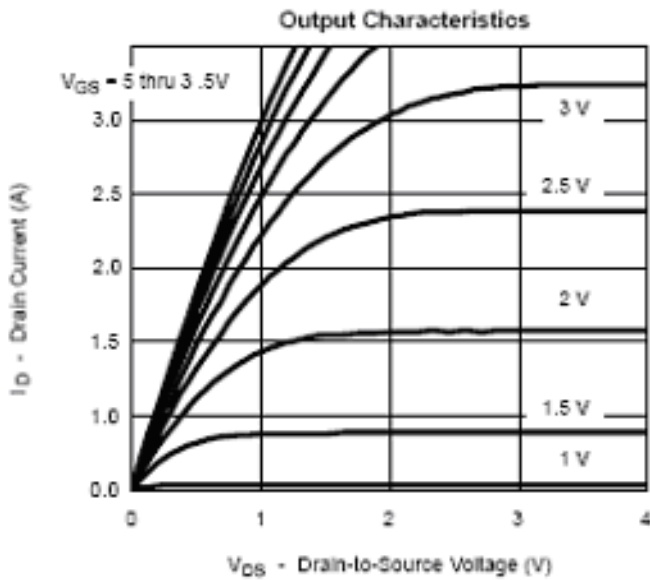
Parameter Symbol		Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250uA -30				V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250uA -0.35			-1.0	
Gate Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±12V			±30	uA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-24V, V _{GS} =0V			-1	uA
		V _{DS} =-24V, V _{GS} =0V T _J =55°C			-5	
On-State Drain Current	I _{D(on)}	V _{DS} ≤ -4.5V, V _{GS} =-5V	-0.7			A
Drain-Source On-Resistance	R _{DSS(on)}	V _{GS} =-4.5V, I _D =-0.45A			0.65	Ω
		V _{GS} =-2.5V, I _D =-0.35A			0.90	
		V _{GS} =-1.8V, I _D =-0.25A			1.50	
Forward Transconductance	g _{fs}	V _{DS} =-10V, I _D =-0.25A		0.4		S
Diode Forward Voltage	V _{SD}	I _S =-0.15A, V _{GS} =0V		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q _g	V _{DS} =-10V, V _{GS} =-4.5V, I _D ≡-0.6A	1.5		2.0	nC
Gate-Source Charge	Q _{gs}		0.3			
Gate-Drain Charge	Q _{gd}		0.35			
Turn-On Time	t _{d(on)}	V _{DD} =-10V, R _L =10Ω, I _D ≡-0.4A V _{GEN} =-4.5V, R _G =6Ω	5		10	ns
	t _r			15	25	
Turn-Off Time	t _{d(off)}		8		15	
	t _f		1.4		1.8	



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TYPICAL CHARACTERISTICS

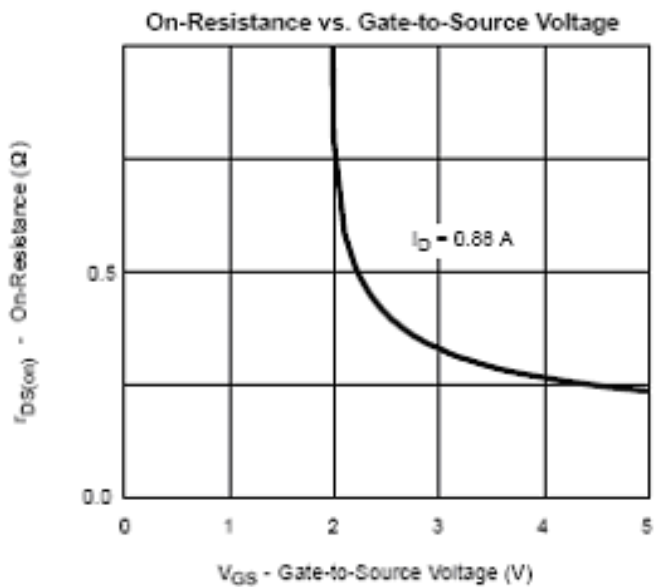
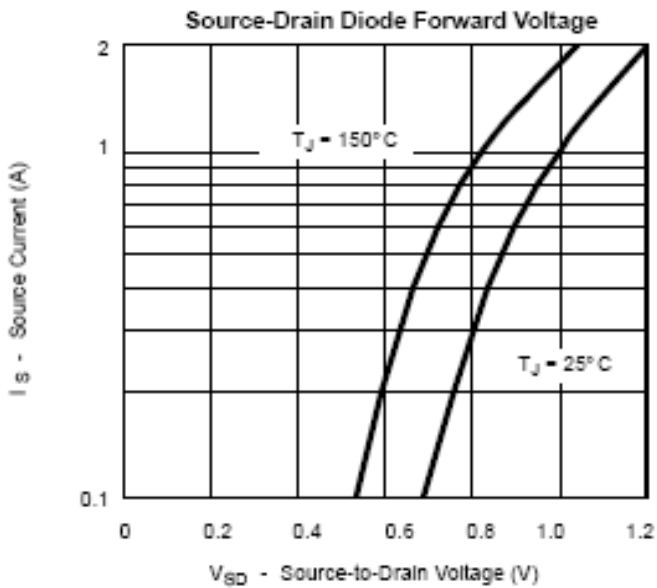
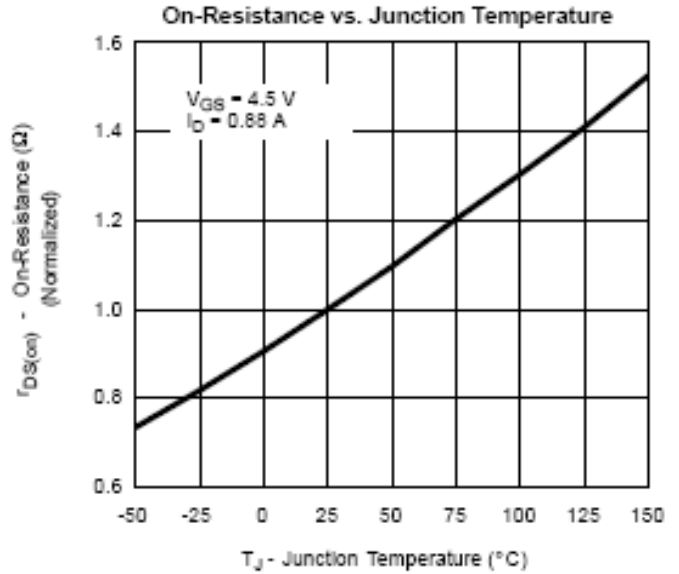
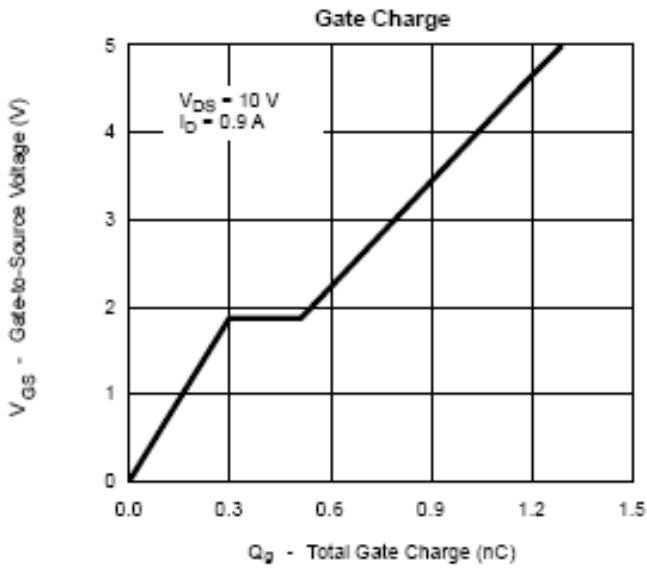




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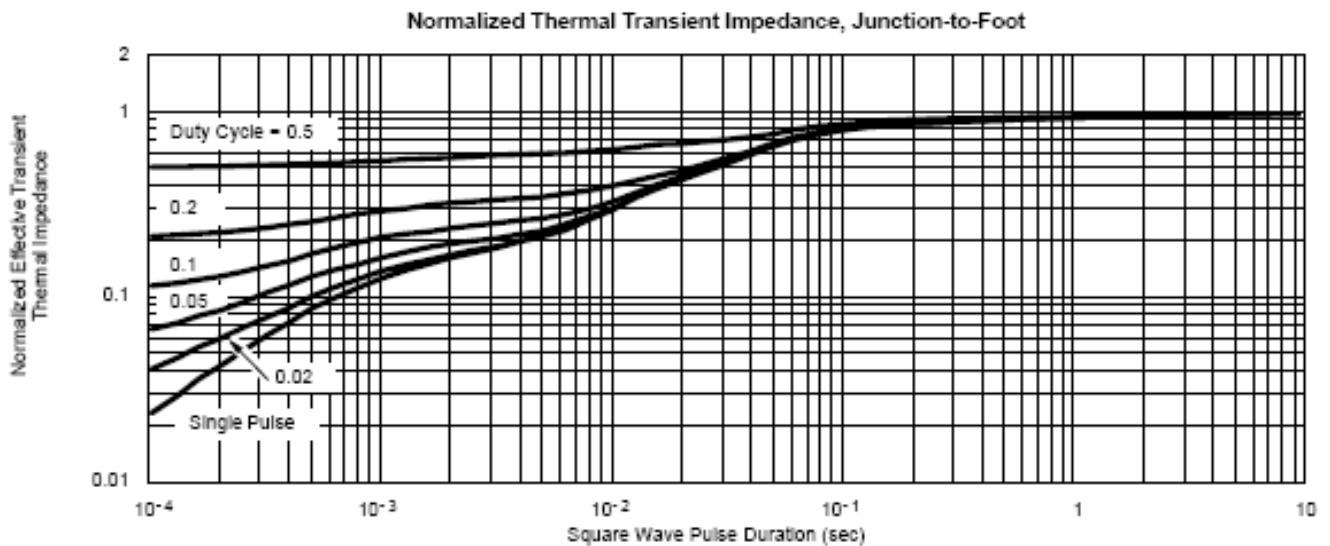
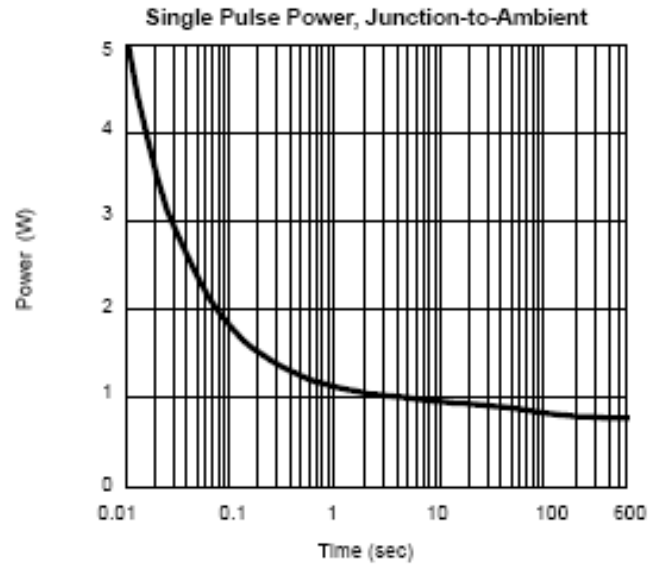
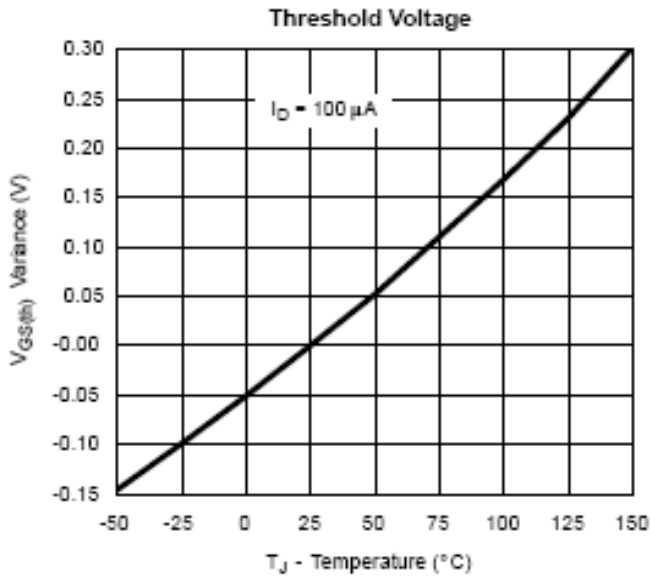




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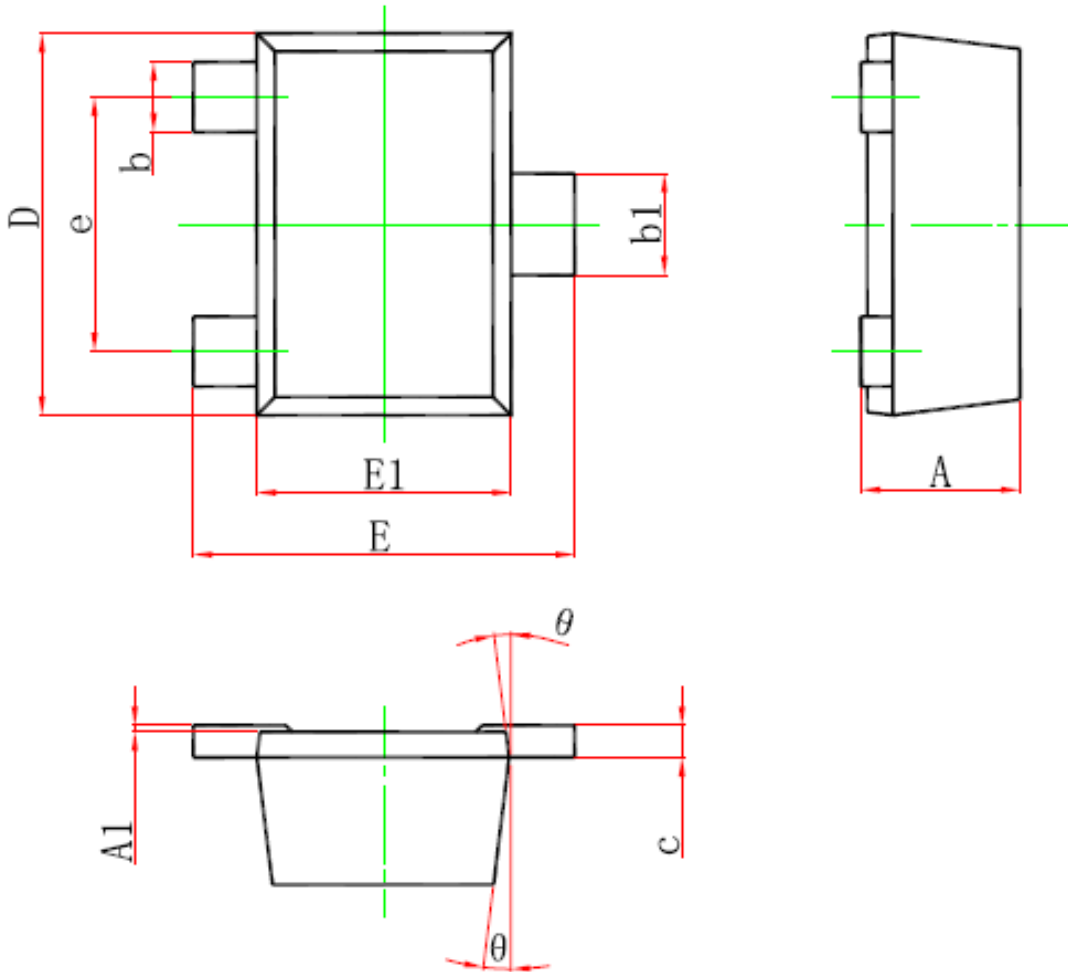




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SOT-723 PACKAGE OUTLINE



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		0.500		0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c		0.150		0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	



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