TECH PUBLIC
台舟电子

## Product Summary

- V_{DS} =-30V, I_D =-8A

  $R_{DS(ON)}$ 18mΩ @-10V

  $R_{DS(ON)}$ 20mΩ @-4.5V

Application

- DC-DC Converters.
- Load Switch.
- Power Management.

## Package and Pin Configuration

SOP-8 top view

|			
S₁	1	8	D₁
G₁	2	7	D₁
S₂	3	6	D₂
G₂	4	5	D₂
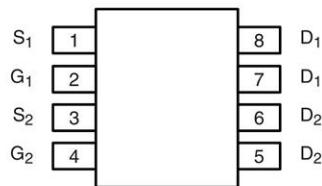
Circuit diagram

Marking:

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● 4925
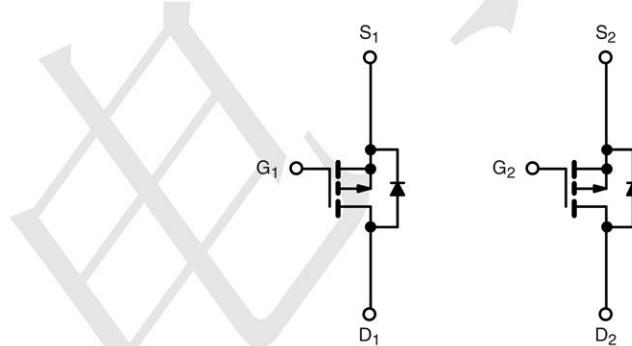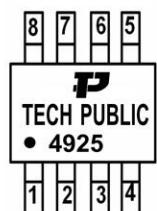
## Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	
Continuous Drain Current	I_D [1]	-8	A
Pulsed Drain Current	I_{DM} [2]	-32	
Power Dissipation	P_D [5]	3.0	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$ [5]	41.6	°C/W
Operating Junction and Storage Temperature	T_J, T_{stg}	-55 ~+150	°C

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Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition		Min	Typ	Max	Unit
Off characteristics							
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA		-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V, V_{GS} =0V	T_J =25℃			-15	μA
			T_J =125℃			-100	
Gate-body leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±20V				±100	nA
On characteristics [3]							
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA		-1.0	-1.6	-2.5	V
Static drain-source on-sate resistance	$R_{DS(on)}$	V_{GS} =-10V, I_D =-8A			18	25	mΩ
		V_{GS} =-4.5V, I_D =-4.5A			20	35	mΩ
Forward transconductance	g_{FS}	V_{DS} =-10V, I_D =-8A			16		S
Dynamic characteristics [3][4]							
Input capacitance	C_{iss}	V_{DS} =-15V,V_{GS} =0V, f =1MHz			1650		pF
Output capacitance	C_{oss}				345		
Reverse transfer capacitance	C_{rss}				285		
Switching characteristics [3][4]							
Total gate charge	Q_g	V_{GS}=-10V, V_{DS}=-15V, I_D=-8A			39		nC
Gate-source charge	Q_{gs}				9.8		
Gate-drain charge	Q_{gd}				8.3		
Turn-on delay time	$t_{d(on)}$	V_{DD}=-15V,I_D=-1A, V_{GS}=-10V,R_G=6Ω, R_D=15Ω			12		ns
Turn-on rise time	t_r				16		
Turn-off delay time	$t_{d(off)}$				125		
Turn-off fall time	t_f				72		
Drain-Source Diode Characteristics							
Drain-source diode forward voltage	V_{SD} [3]	V_{GS} =0V, I_S=-2A				-1.2	V
Continuous drain-source diode forward current	I_S [1]					-8	A
Pulsed drain-source diode forward current	I_{SM} [2]					-32	A

Typical Performance Characteristics (T$_A$=25°C unless otherwise Specified)

Output Characteristics

Transfer Characteristics

R$_{DS(ON)}$ — I$_D$

R$_{DS(ON)}$ — V$_{GS}$

I$_S$ — V$_{SD}$

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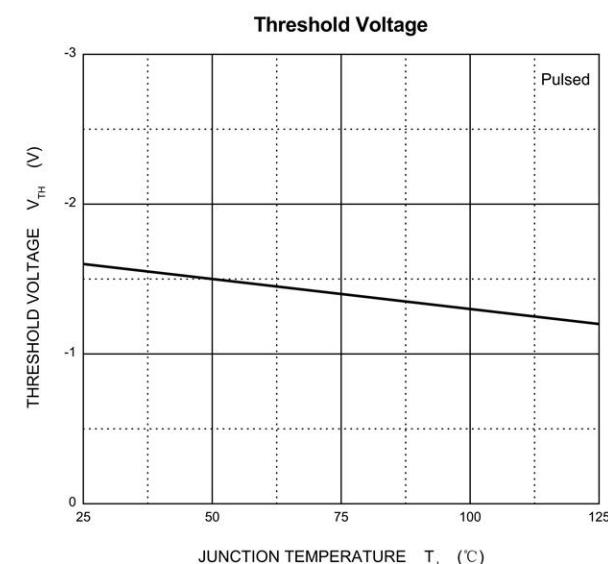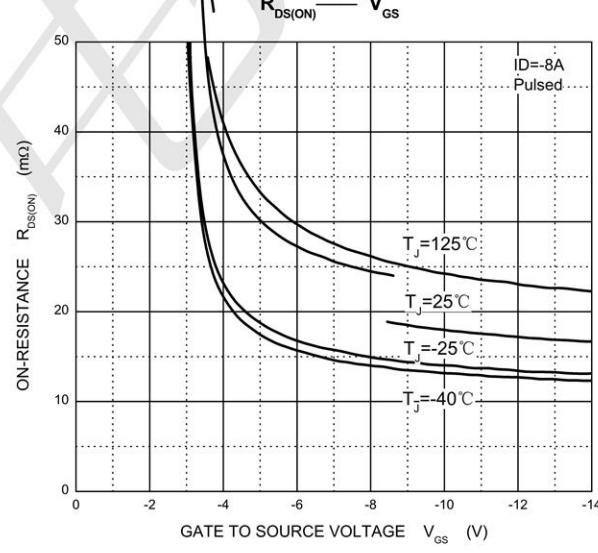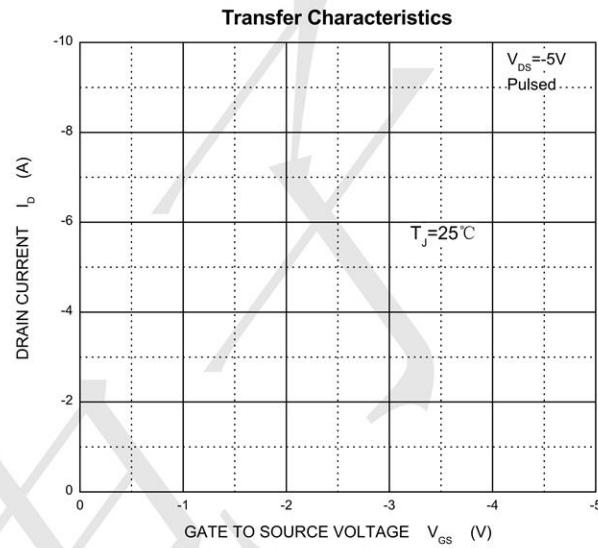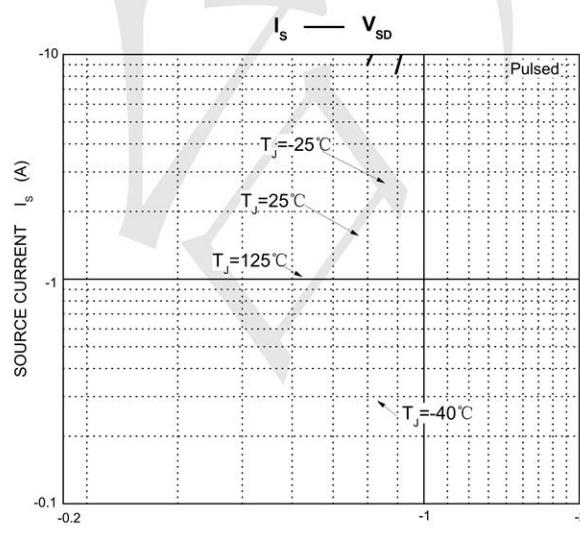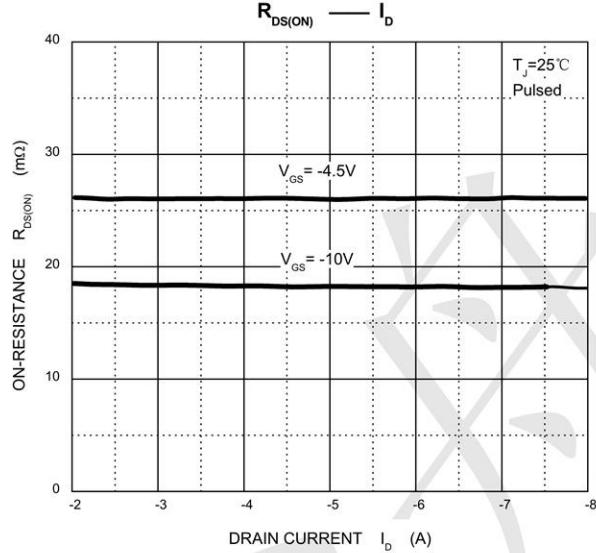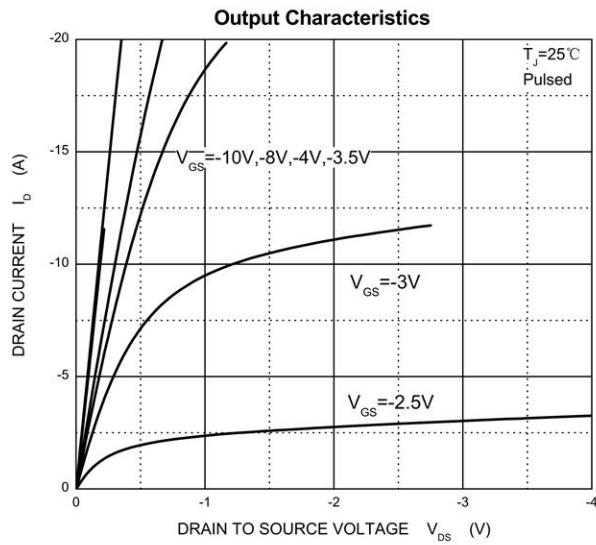
SOP-8 Package Information
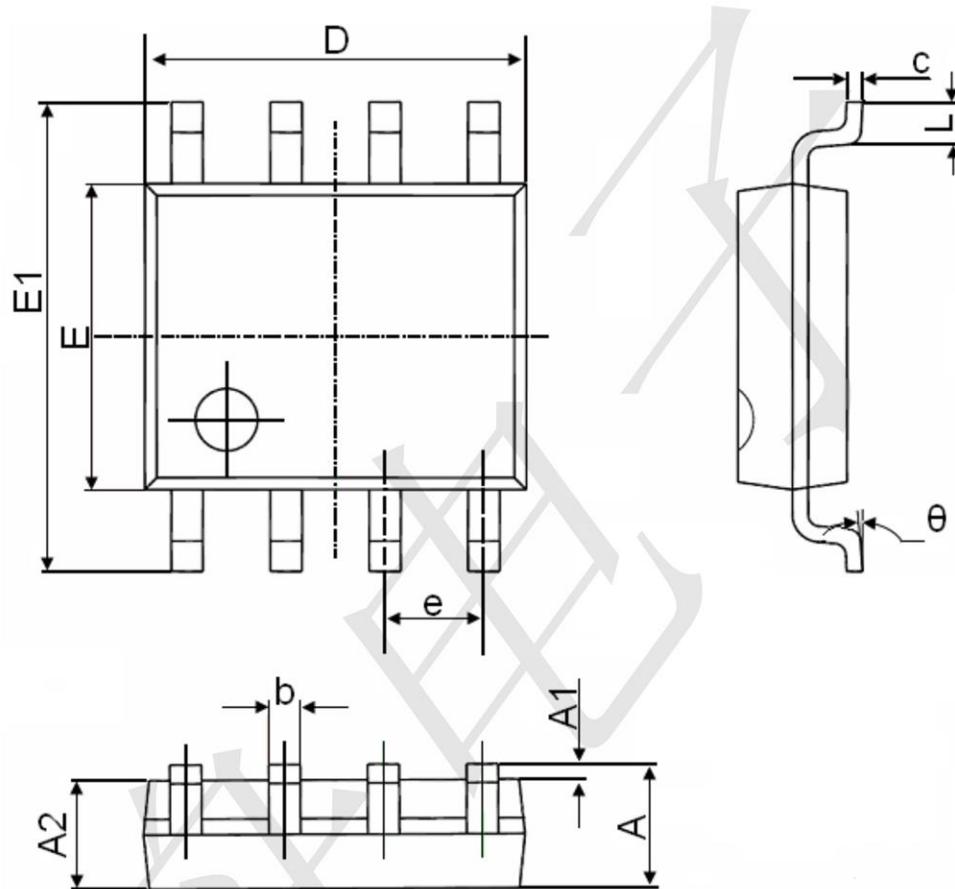
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)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