

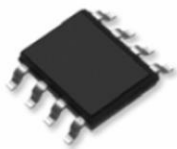
**Product Summary**

- $V_{DS} = -30V, I_D = -8A$
- $R_{DS(ON)} = 18m\Omega @ -10V$
- $R_{DS(ON)} = 20m\Omega @ -4.5V$

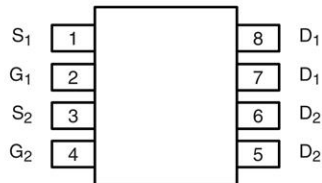
**Application**

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

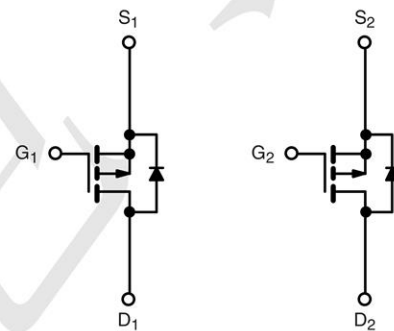
**Package and Pin Configuration**



SOP-8 top view



**Circuit diagram**



**Marking:**



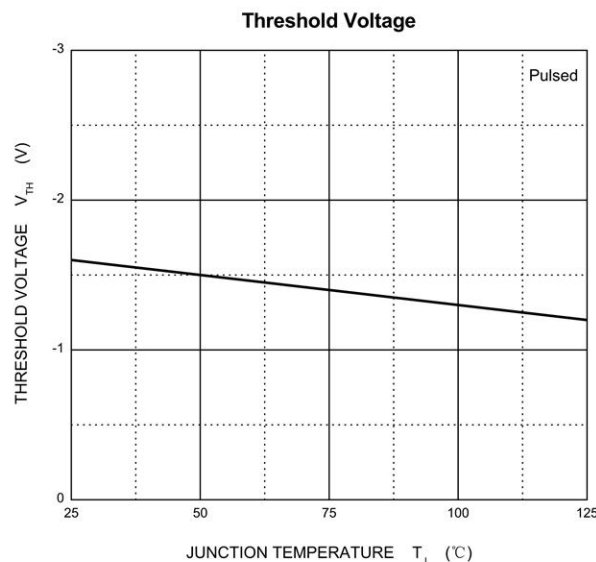
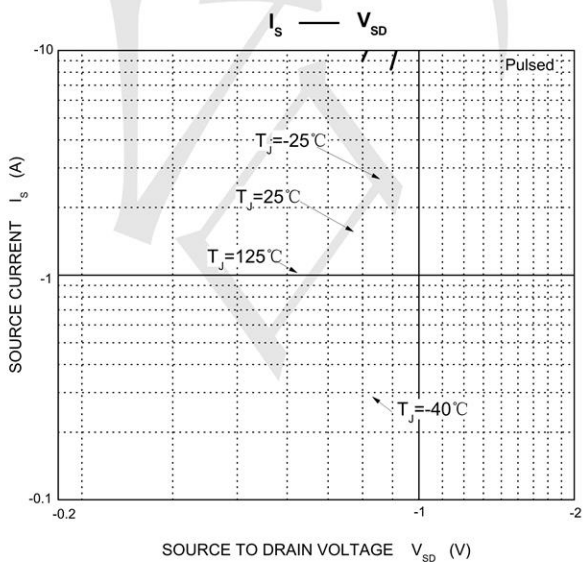
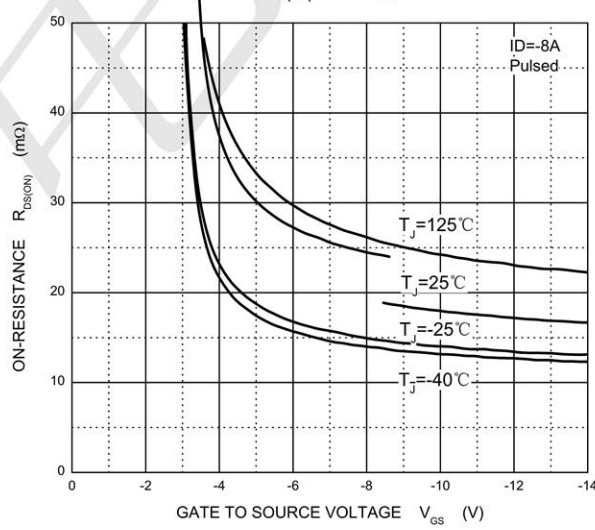
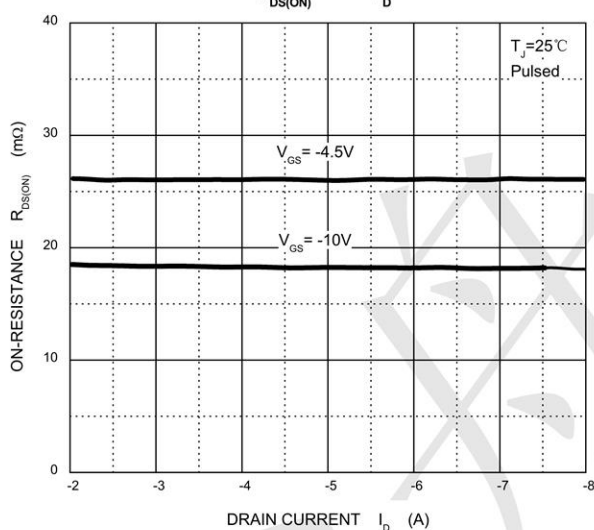
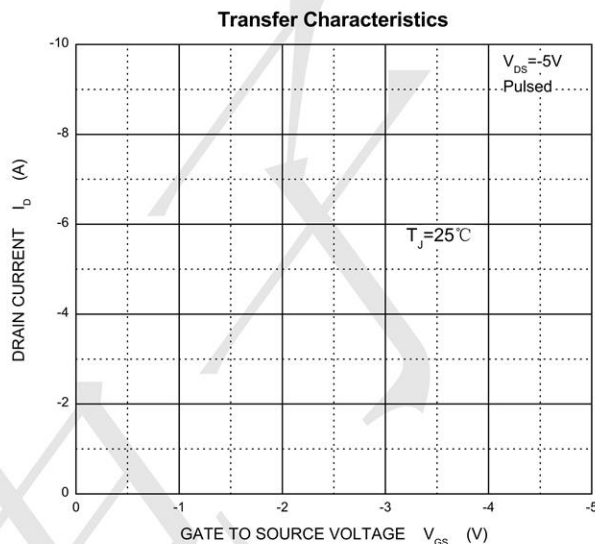
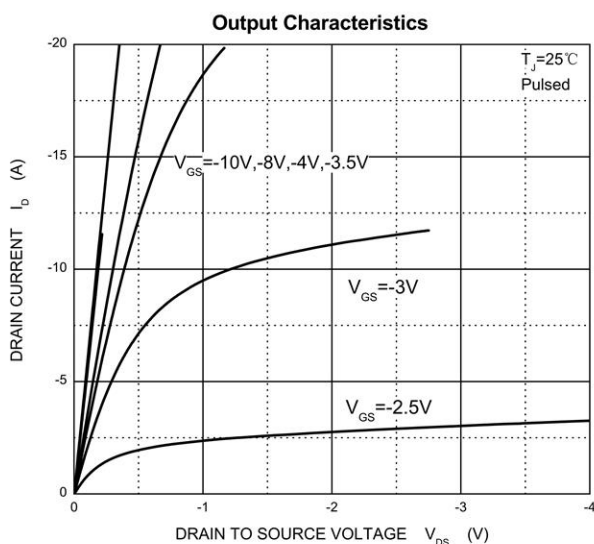
**Absolute Maximum Ratings ( $T_A = 25^\circ C$  unless otherwise noted)**

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	-30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	
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	$^\circ C/W$
Operating Junction and Storage Temperature	$T_J, T_{stg}$	-55 ~ +150	$^\circ C$

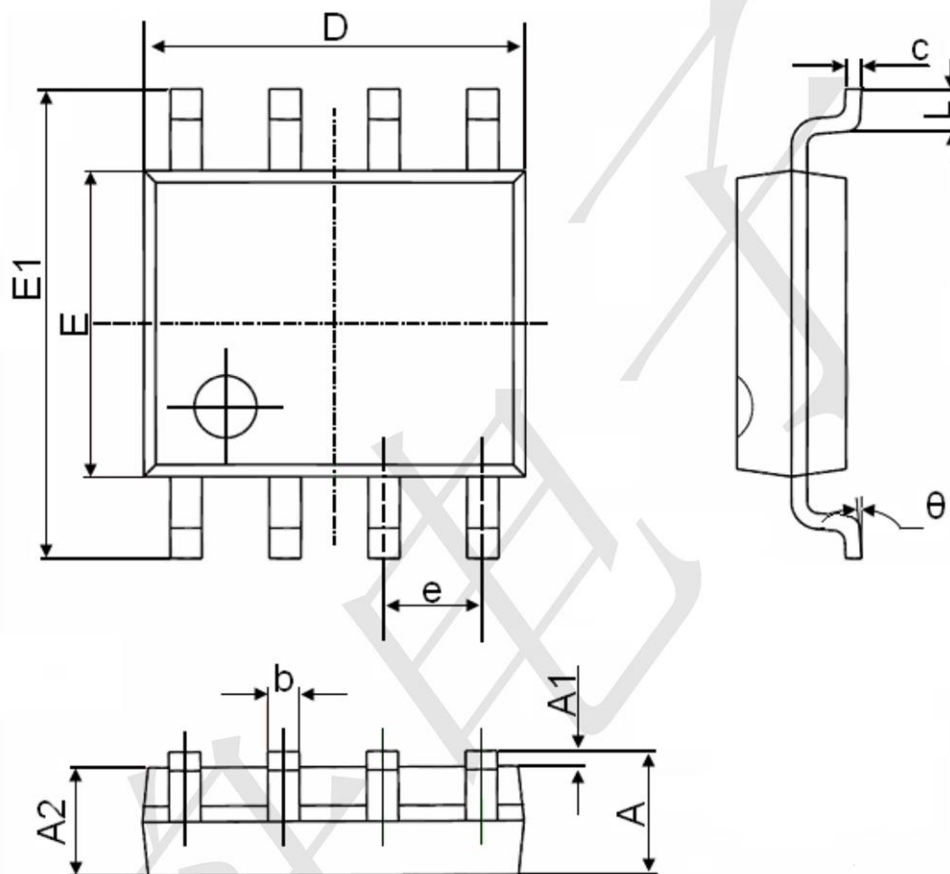
**Electrical Characteristics (  $T_A = 25^\circ\text{C}$  unless otherwise noted )**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>Off characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = -24V, V_{GS} = 0V$	$T_J = 25^\circ\text{C}$		-15	$\mu A$
			$T_J = 125^\circ\text{C}$		-100	
Gate-body leakage current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$			$\pm 100$	nA
<b>On characteristics</b> <sup>③</sup>						
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1.0	-1.6	-2.5	V
Static drain-source on-state resistance	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -8A$		18	25	m $\Omega$
		$V_{GS} = -4.5V, I_D = -4.5A$		20	35	m $\Omega$
Forward transconductance	$g_{fs}$	$V_{DS} = -10V, I_D = -8A$		16		S
<b>Dynamic characteristics</b> <sup>③④</sup>						
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		
<b>Switching characteristics</b> <sup>③④</sup>						
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	$t_{d(on)}$	$V_{DD} = -15V, I_D = -1A, V_{GS} = -10V, R_G = 6\Omega, R_D = 15\Omega$		12		ns
Turn-on rise time	$t_r$			16		
Turn-off delay time	$t_{d(off)}$			125		
Turn-off fall time	$t_f$			72		
<b>Drain-Source Diode Characteristics</b>						
Drain-source diode forward voltage	$V_{SD}$ <sup>③</sup>	$V_{GS} = 0V, I_S = -2A$			-1.2	V
Continuous drain-source diode forward current	$I_S$ <sup>①</sup>				-8	A
Pulsed drain-source diode forward current	$I_{SM}$ <sup>②</sup>				-32	A

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**



**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°

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