

## Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	$I_D$
20V	27mΩ@4.5V	5A
	32mΩ@2.5V	

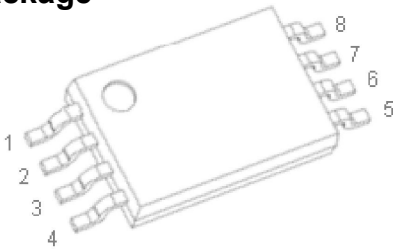
## Feature

- Low gate charge
- Low  $R_{DS(on)}$

## Application

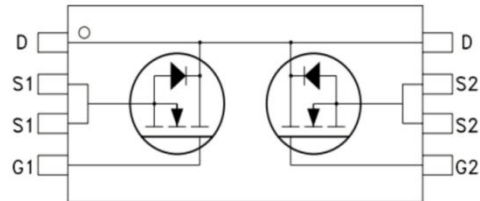
- Battery protection
- Switching application

## Package

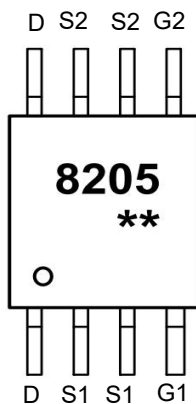


TSSOP-8

## Circuit diagram



## Marking



### Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	20	V
Gate-Source Voltage	$V_{GS}$	±12	V
Continuous Drain Current(t≤10s)	$I_D$	5	A
Pulsed Drain Current	$I_{DM}$	25	A
Power Dissipation(t≤10s)	$P_D$	1.5	W
Thermal Resistance from Junction to Ambient(t≤10s)	$R_{\theta JA}$	83.3	°C/W
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	-55 ~ +150	°C

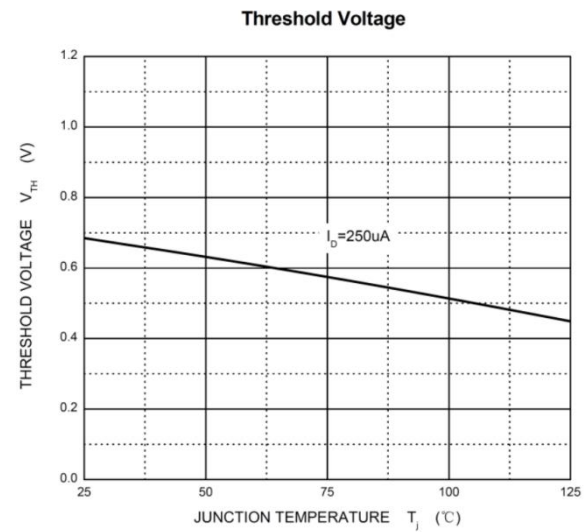
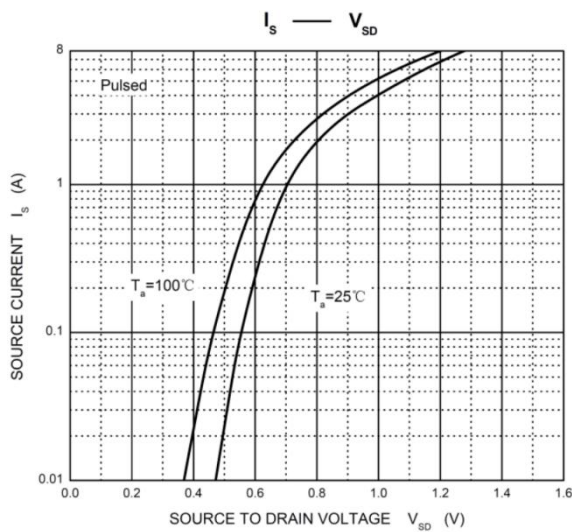
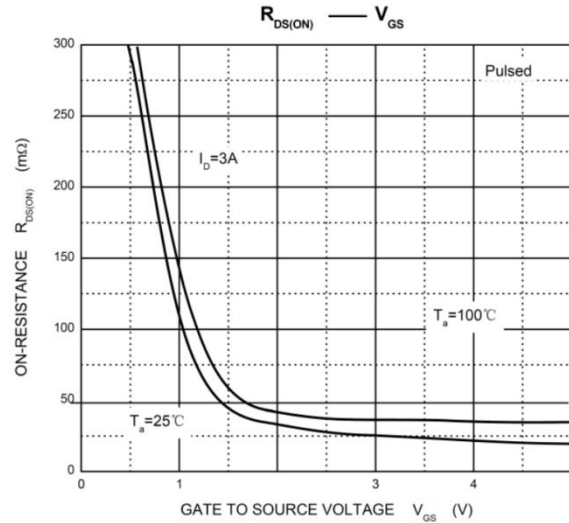
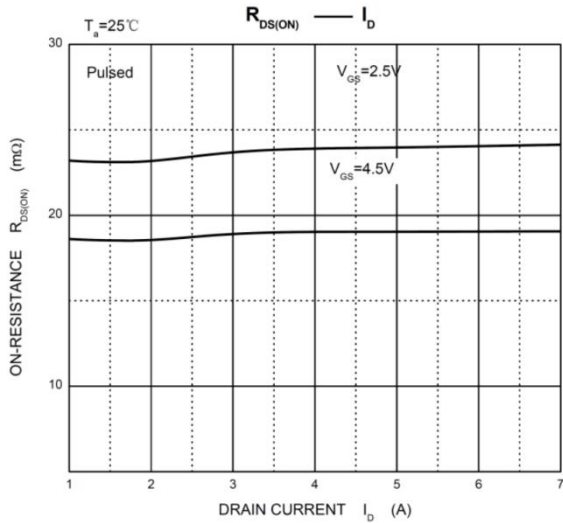
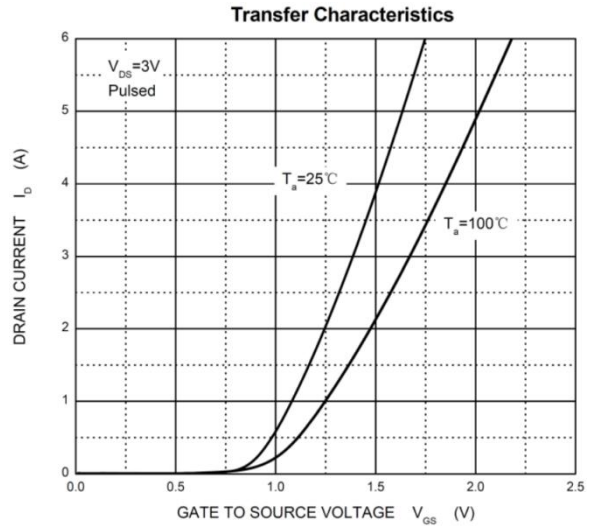
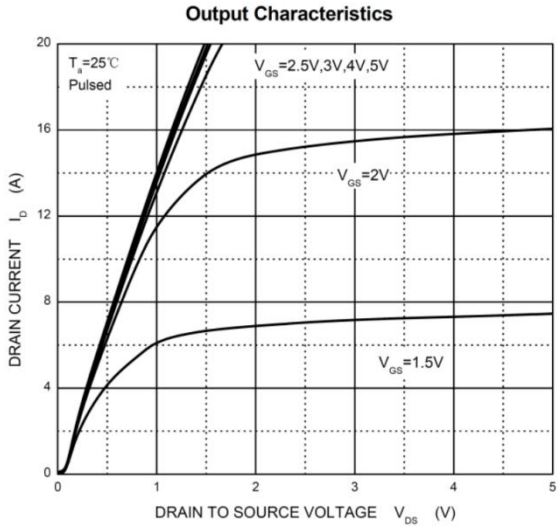
### Electrical characteristics (TA=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 20V, V_{GS} = 0V$			1	μA
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 12V, V_{DS} = 0V$			±100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.5	0.66	1.2	V
Drain-source on-resistance	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 4.5A$		20	27	mΩ
		$V_{GS} = 2.5V, I_D = 3.5A$		26	32	
<b>Dynamic characteristics<sup>1)</sup></b>						
Input Capacitance	$C_{iss}$	$V_{DS} = 8V, V_{GS} = 0V, f = 1MHz$		800		pF
Output Capacitance	$C_{oss}$			155		
Reverse Transfer Capacitance	$C_{rss}$			125		
Total Gate Charge	$Q_g$	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 4A$		11		nC
Gate-Source Charge	$Q_{gs}$			2.3		
Gate-Drain Charge	$Q_{gd}$			2.5		
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 10V, V_{GS} = 4V, I_D = 1A$ $R_G = 10\Omega$		18		nS
Turn-on rise time	$t_r$			5		
Turn-off delay time	$t_{d(off)}$			43		
Turn-off fall time	$t_f$			20		
<b>Source-Drain Diode characteristics</b>						
Diode Forward voltage	$V_{SD}$	$V_{GS} = 0V, I_S = 1.7A$			1.2	V

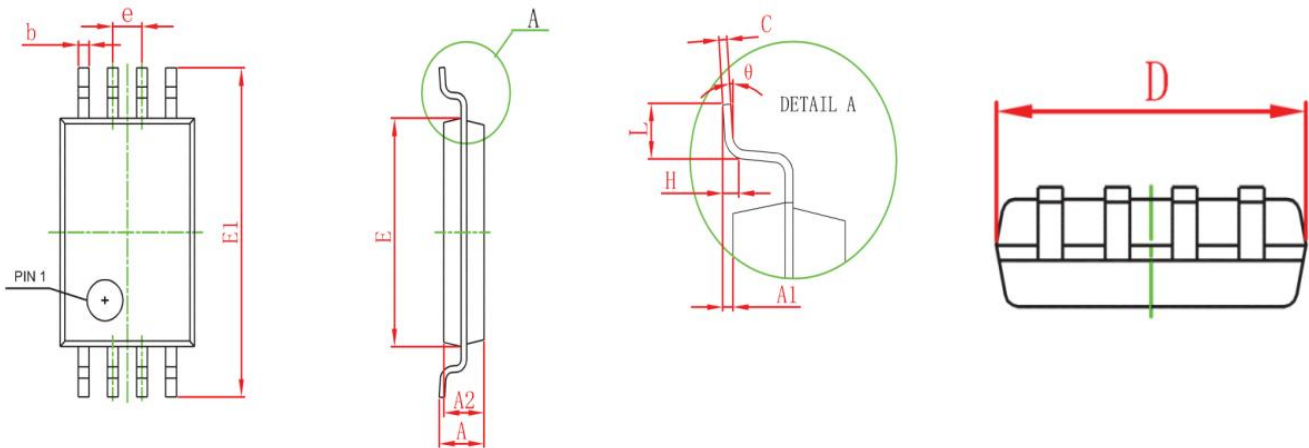
Notes:

1) Guaranteed by design, not subject to production testing.

## Typical Characteristics



### TSSOP-8 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
D	2.900	3.100	0.114	0.122
E	4.300	4.500	0.169	0.177
b	0.190	0.300	0.007	0.012
c	0.090	0.200	0.004	0.008
E1	6.250	6.550	0.246	0.258
A	-	1.200	-	0.047
A2	0.800	1.000	0.031	0.039
A1	0.050	0.150	0.002	0.006
e	0.650(BSC)		0.260(BSC)	
L	0.500	0.700	0.020	0.028
H	0.250(TYP)		0.010(TYP)	
$\theta$	1°	7°	1°	7°