Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
20V	20mΩ@4.5V	5A
	26mΩ@2.5V	

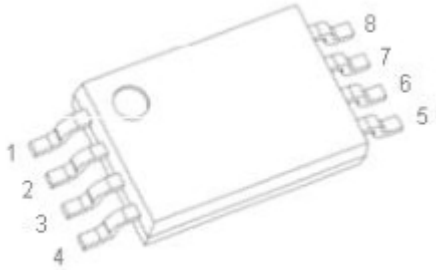
Feature

- Low gate charge
- Low RDS(on)

Applications

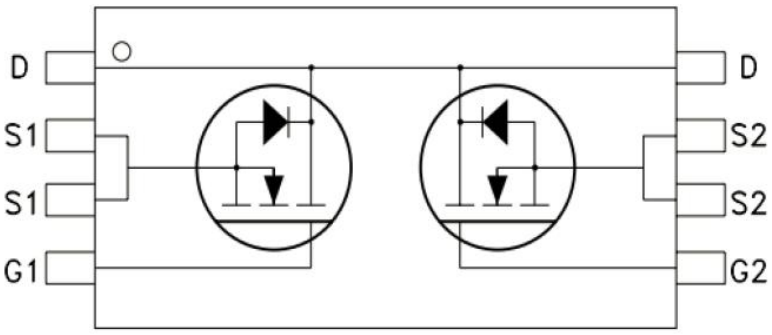
- Battery protection
- Switching application.

Package

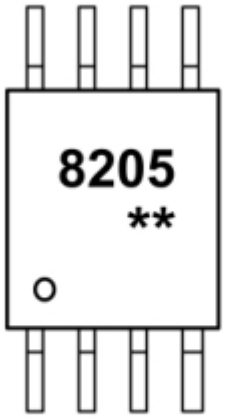


TSSOP-8

Circuit diagram



Marking



8205 =Device Code
** =Week Code

Absolute maximum ratings

(T_a=25℃ 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	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

Electrical characteristics

(T_A=25℃, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$BV_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =20V, V_{GS} = 0V			1	uA
Gate-body leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±0.1	uA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	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	
Diode forward voltage	V_{SD}	I_S=1.7A, V_{GS}=0V		0.77	1.2	V
Dynamic Characteristics						
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		
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		
Switching Characteristics						
Turn-on Delay Time	$T_{d(on)}$	V_{DD}=10V, V_{GS}=4V, I_D=1A, R_{GEN}=10Ω		18		nS
Turn-on Rise Time	T_r			5		
Turn-Off Delay Time	$T_{d(off)}$			43		
Turn-Off Fall Time	t_f			20		

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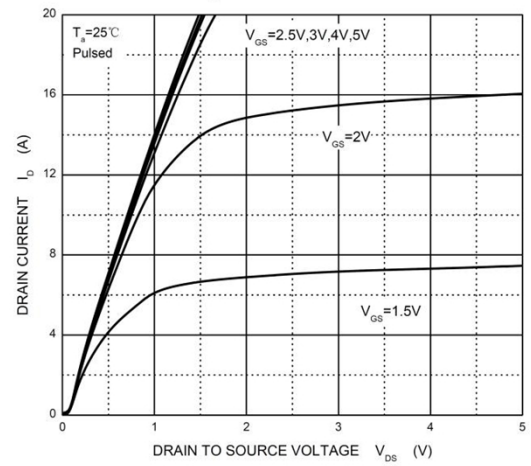
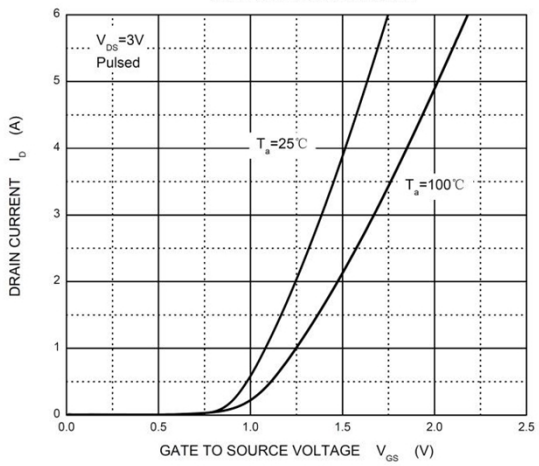
Typical Characteristics

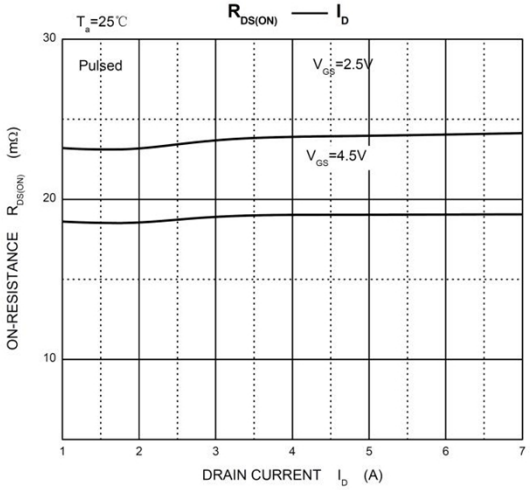
Output Characteristics



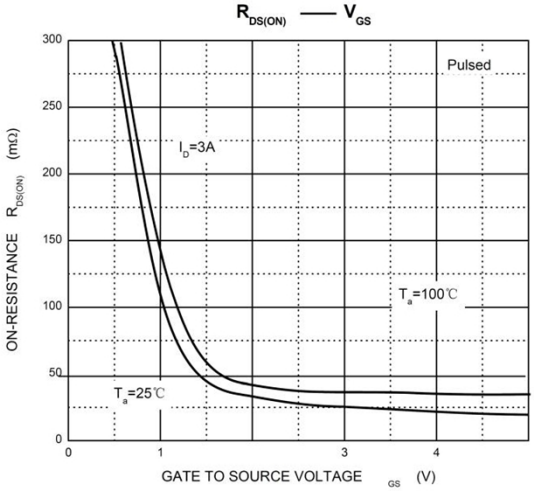
Transfer Characteristics



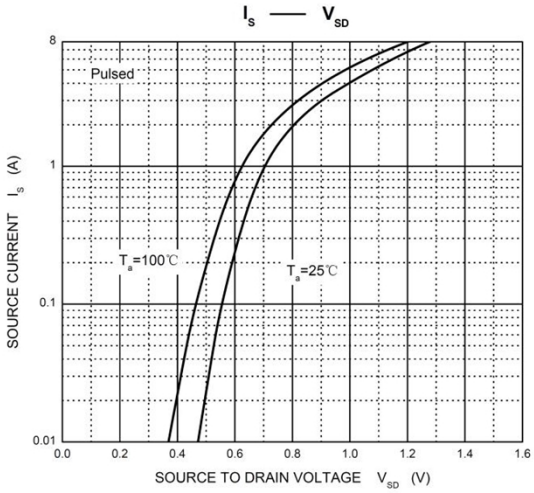
$R_{DS(ON)}$ — I_D



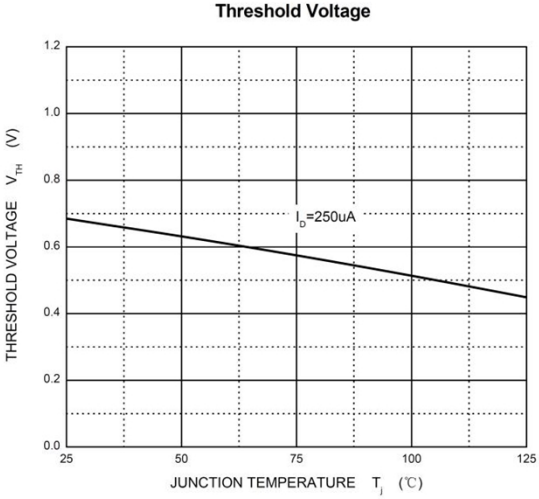
$R_{DS(ON)}$ — V_{GS}



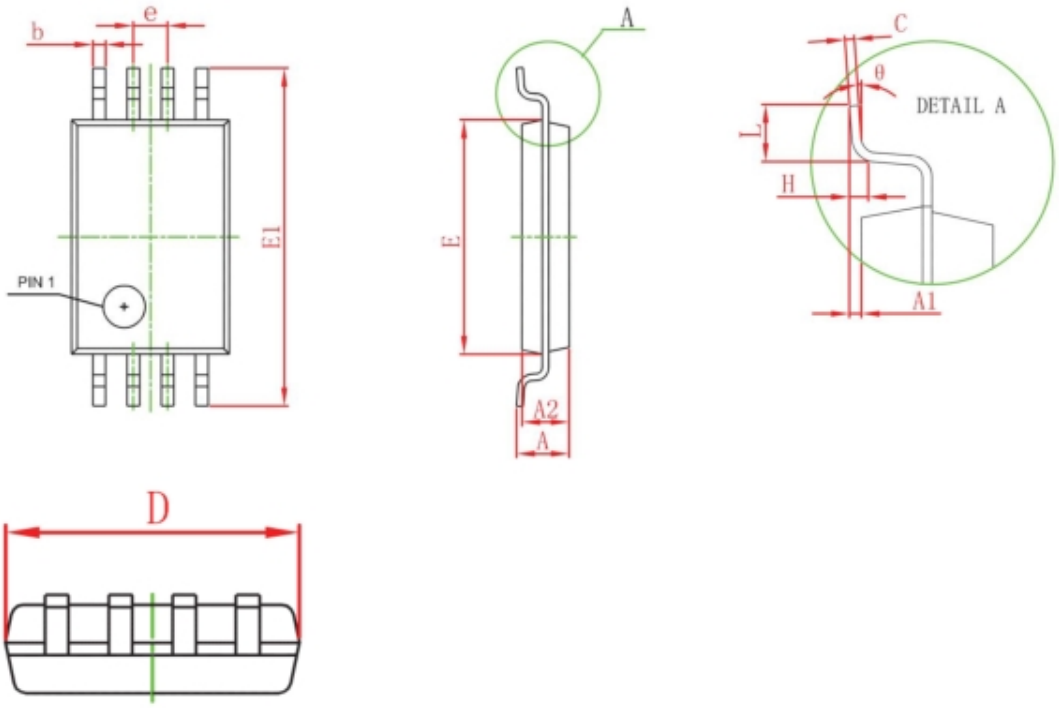
I_S — V_{SD}



Threshold Voltage



TSSOP8 Package Information



Symbol	Dimensions In Millimeters	
	Min	Max
D	2.900	3.100
E	4.300	4.500
b	0.190	0.300
c	0.090	0.200
E1	6.250	6.550
A		1.200
A2	0.800	1.000
A1	0.050	0.150
e	0.65(BSC)	
L	0.500	0.700
H	0.25(TYP)	
θ	1°	7°