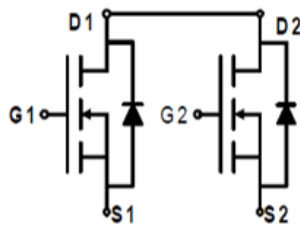
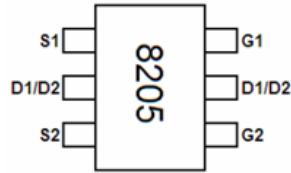


SOT-23-6



Product Summary

- V_{DS} 20V
- I_D 4.0A
- $R_{DS(ON)}$ (at $V_{GS}=4.5V$) <25 mohm
- $R_{DS(ON)}$ (at $V_{GS}=2.5V$) <32 mohm
- $R_{DS(ON)}$ (at $V_{GS}=1.8V$) <49 mohm

General Description

- Trench Power LV MOSFET technology
- High Power and current handling capability

Applications

- PWM application
- Load switch

■ Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	20	V
Gate-source Voltage	V_{GS}	± 10	V
Drain Current	I_D	$T_A=25^\circ\text{C}$ @ Steady State	4.0
		$T_A=70^\circ\text{C}$ @ Steady State	3.2
Pulsed Drain Current ^A	I_{DM}	18	A
Total Power Dissipation @ $T_A=25^\circ\text{C}$	P_D	1.25	W
Thermal Resistance Junction-to-Ambient @ Steady State ^B	$R_{\theta JA}$	100	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
LMS8205A	F2	.S0	3000	30000	120000	

■ Electrical Characteristics (T_J=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D =250μA	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V, T _C =25°C			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} = ± 10V, V _{DS} =0V			± 100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250μA	0.45	0.62	1.0	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = 4.5V, I _D =4.0A		19.5	25	mΩ
		V _{GS} = 2.5V, I _D =3.5A		25	32	
		V _{GS} = 1.8V, I _D =2.7A		33	49	
Diode Forward Voltage	V _{SD}	I _S =4.0A, V _{GS} =0V			1.2	V
Maximum Body-Diode Continuous Current	I _S				4.0	A
Dynamic Parameters						
Input Capacitance	C _{ISS}	V _{DS} =10V, V _{GS} =0V, f=1MHZ		620		pF
Output Capacitance	C _{OSS}			114		
Reverse Transfer Capacitance	C _{rSS}			64		
Switching Parameters						
Total Gate Charge	Q _g	V _{GS} =4.5V, V _{DS} =10V, I _D =4.0A		4.2		nC
Gate Source Charge	Q _{gs}			0.9		
Gate Drain Charge	Q _{gd}			1.4		
Turn-on Delay Time	t _{D(on)}	V _{GS} =4.5V, V _{DD} =10V, R _L =1.5Ω, R _{GEN} =3Ω		13		ns
Turn-on Rise Time	t _r			54		
Turn-off Delay Time	t _{D(off)}			18		
Turn-off Fall Time	t _f			11		

A. Pulse Test: Pulse Width ≤ 300μs, Duty cycle ≤ 2%.

B. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

■ Typical Performance Characteristics

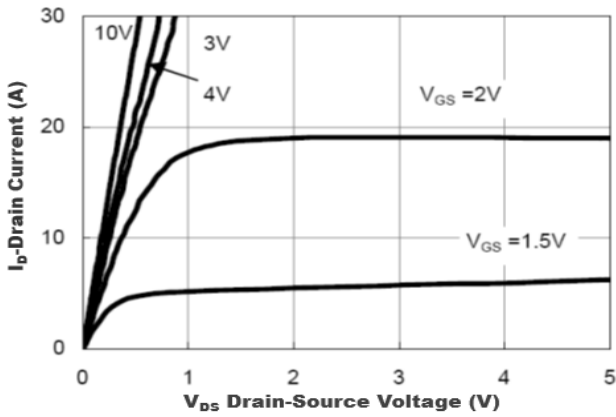


Figure1. Output Characteristics

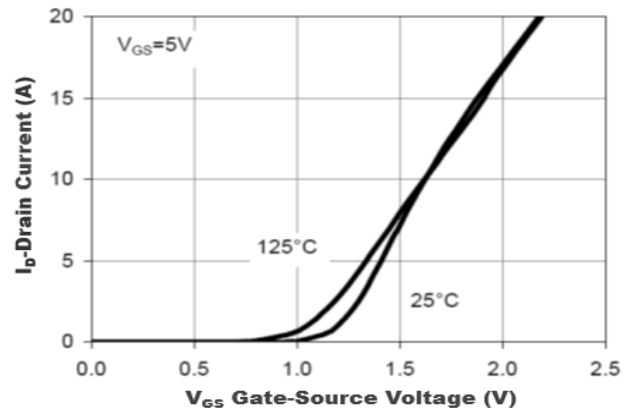


Figure2. Transfer Characteristics

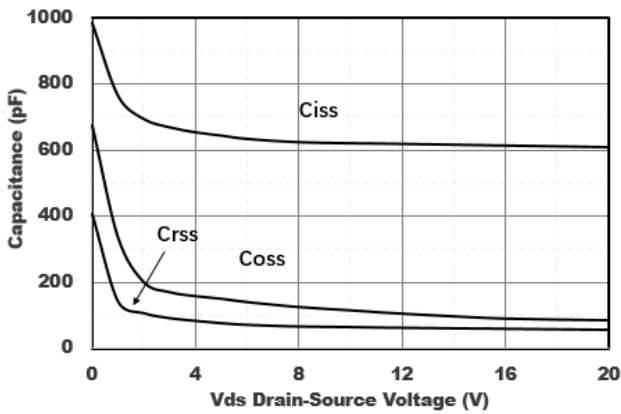


Figure3. Capacitance Characteristics

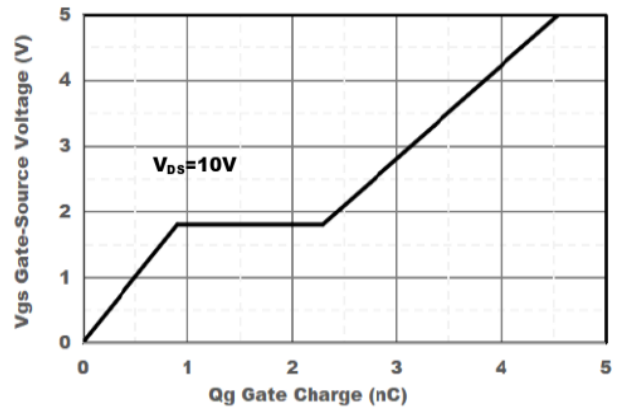


Figure4. Gate Charge

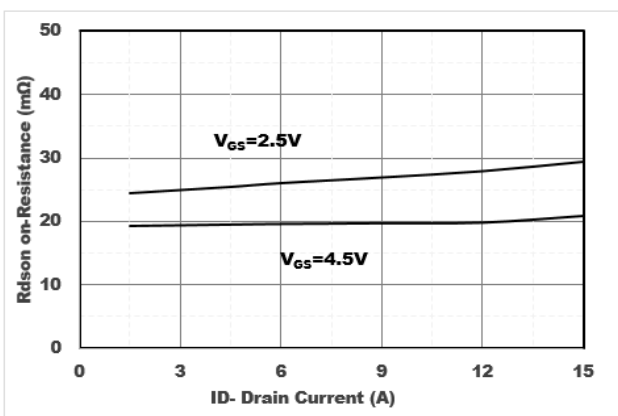


Figure5. Drain-Source on Resistance

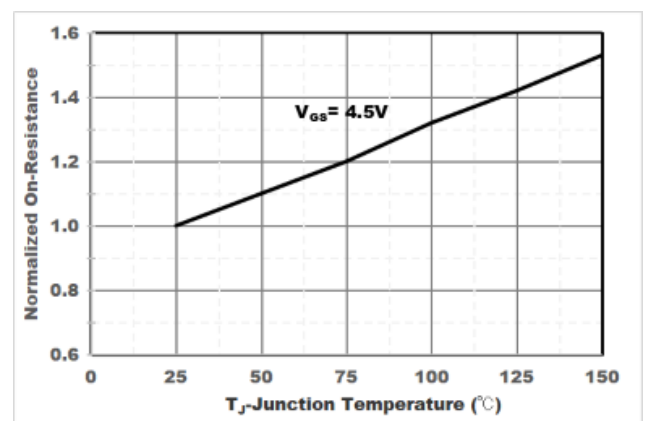


Figure6. Drain-Source on Resistance

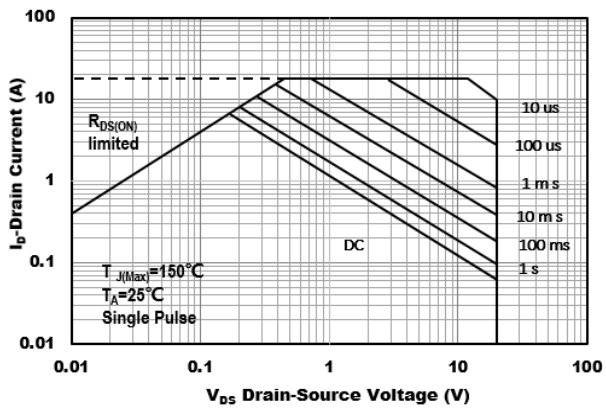


Figure7. Safe Operation Area

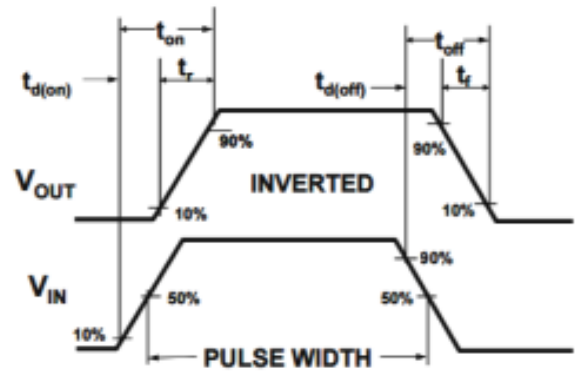
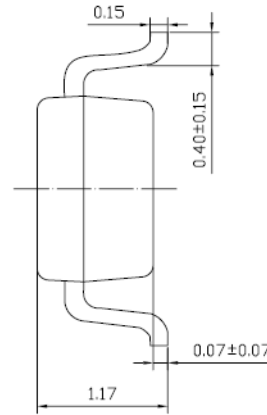
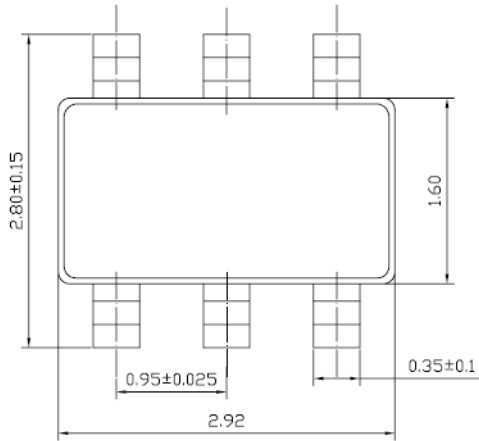


Figure8. Switching wave

■SOT-23-6 Package information



技术要求:

- 1.树脂体不应有崩裂、缺损等缺陷;
- 2.未注公差:±0.050;
- 3.树脂上下部X、Y方向偏差不超过0.08MAX;
- 4.胶体两端留废胶总和宽度不超过0.30;
- 5.所有单位为mm;