

AP8205A

N-Channel Power MOSFET

描述 / Descriptions

TSSOP8 塑封封装 N 沟道双 MOS 管。N-channel Double MOSFET in a TSSOP8 Plastic Package.

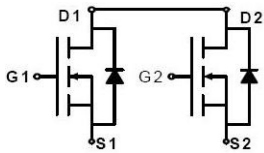
特征 / Features

采用先进的沟槽技术，提供较小的导通电阻 $R_{DS(on)}$ ，低栅极电荷，栅极工作电压低至 2.5V。
advanced trench technology to provide excellent $R_{DS(on)}$, low gate charge and operation with gate voltages as low as 2.5V.

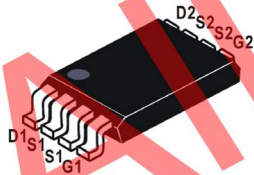
用途 / Applications

适用于电池保护电路，开关电路。
Use as a Battery protection , Switching application.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



印章代码 / Marking

Marking	8205A
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极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DS}	20	V
Drain Current - Continuous	$I_D(T_a=25^\circ\text{C})$	6	A
Drain Current - Continuous	$I_D(T_a=70^\circ\text{C})$	4.8	A
Drain Current – Pulsed	I_{DM}	20	A
Gate-Source Voltage	V_{GS}	±8.0	V
Maximum Power Dissipation	$P_D(T_a=25^\circ\text{C})$	1.5	W
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	110	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions		最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$	$I_D=250\mu A$	20			V
Drain-Source Leakage Current($T_j=25^\circ\text{C}$)	I_{DSS}	$V_{DS}=20V$	$V_{GS}=0V$			1	μA
Drain-Source Leakage Current($T_j=70^\circ\text{C}$)	I_{DSS}	$V_{DS}=16V$	$V_{GS}=0V$			25	μA
Gate-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 10V$	$V_{DS}=0V$			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=250\mu A$	0.5		1.2	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=4.5V$	$I_D=6.0A$			26	m Ω
		$V_{GS}=2.5V$	$I_D=5.2A$			36	m Ω
Forward Transconductance	g_{FS}	$V_{DS}=10V$	$I_D=6.0A$		20		S
Forward On Voltage	V_{SD}	$V_{GS}=0V$	$I_S=1.7A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=20V$ $f=1.0MHz$	$V_{GS}=0V$		1035		pF
Output Capacitance	C_{oss}				320		pF
Reverse Transfer Capacitance	C_{rSS}				150		pF
Turn-on Delay Time	$t_{d(on)}$	$V_{DS}=10V$ $V_{GS}=5V$ $R_D=10\Omega$	$I_D=1A$ $R_G=6\Omega$		30		ns
Rise Time	t_r				70		ns
Turn-off Delay Time	$t_{d(off)}$				40		ns
Fall Time	t_f				65		ns

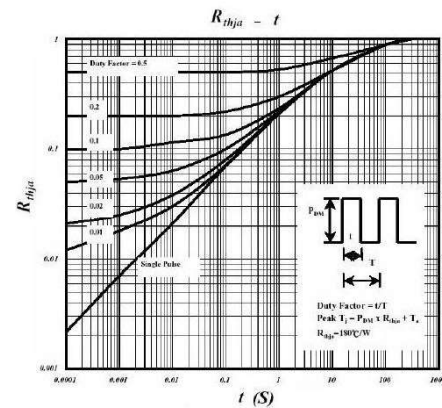
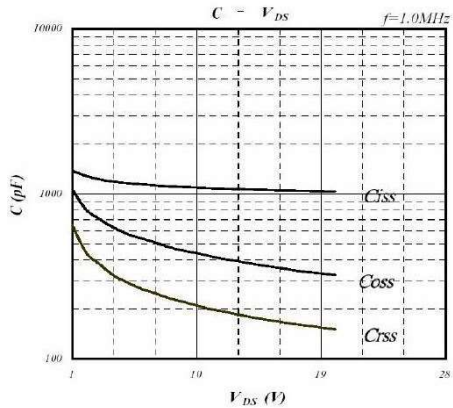
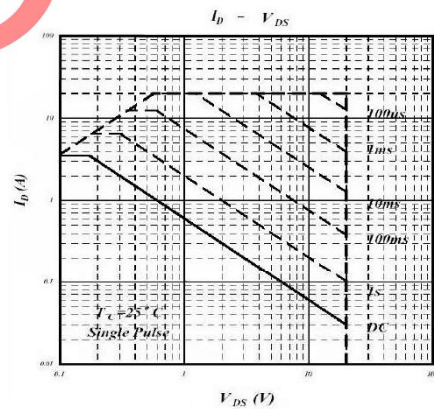
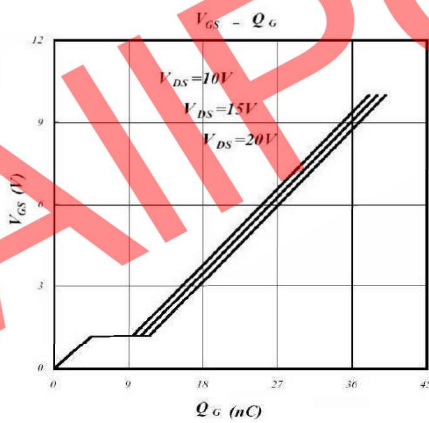
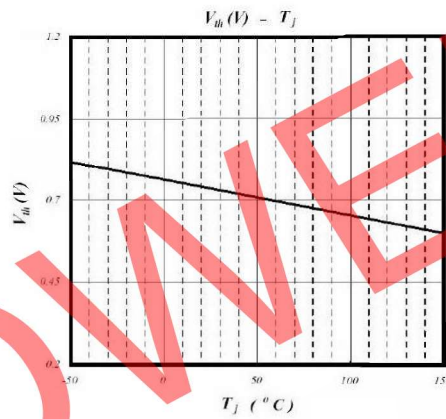
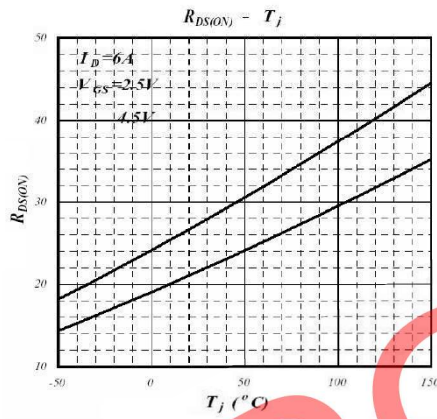
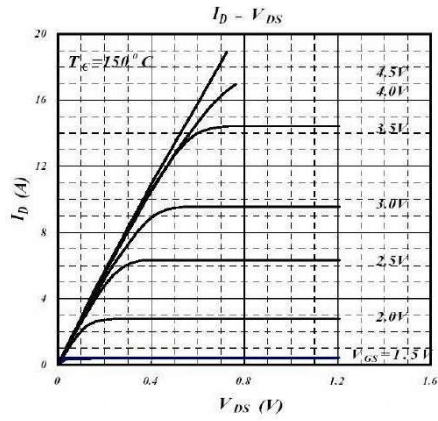
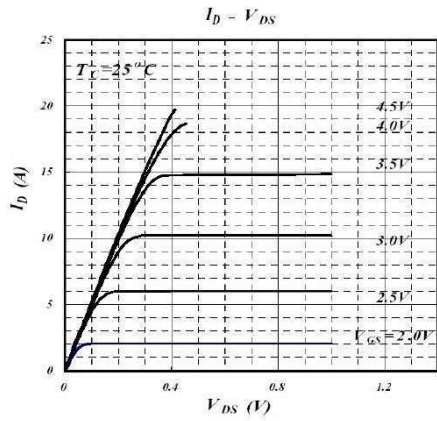
注/Notes:

1. 面装在FR4板, $t \leq 10$ 秒。Surface Mounted on FR4 Board, $t \leq 10$ sec.
2. 冲测试: 脉冲宽度 $\leq 300\mu s$, 占空比 $\leq 2\%$ 。Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

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电参数曲线图 / Electrical Characteristic Curve



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