

描述 / Descriptions

SOT-23 塑封封装 N 道 MOS 场效应管。N- CHANNEL MOSFET in a SOT-23 Plastic Package.

特征 / Features

沟道场效应管。

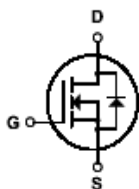
Trench FET Power MOSFET.

用途 / Applications

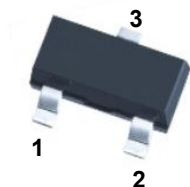
高速开关。

High speed switch.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : G

PIN 2 : S

PIN 3 : D

印章代码 / Marking

Marking	C2H
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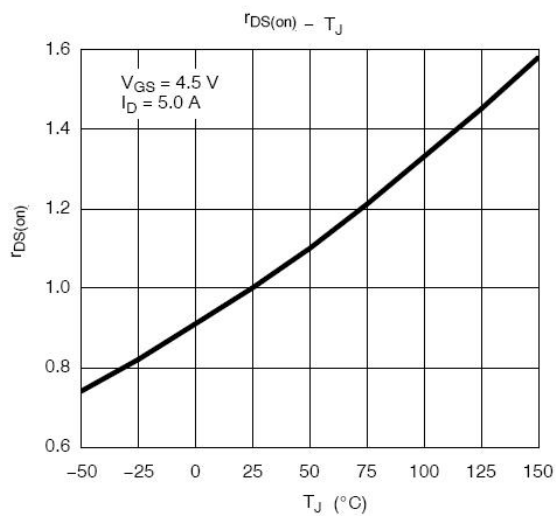
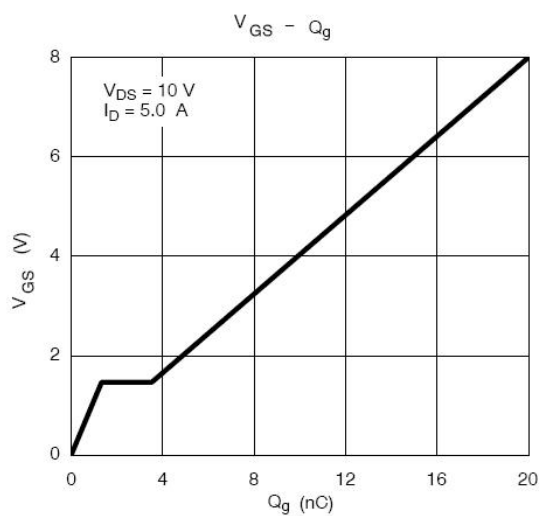
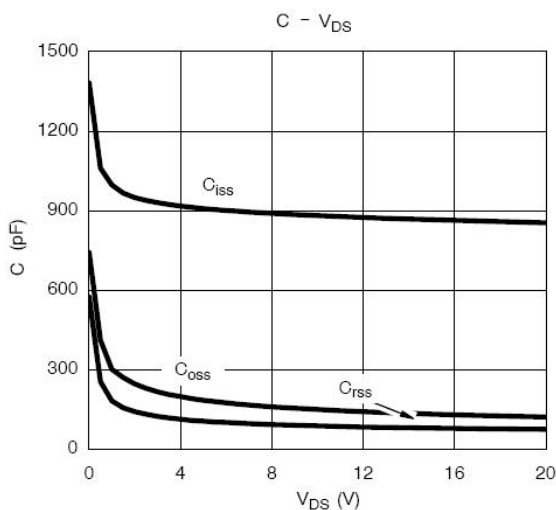
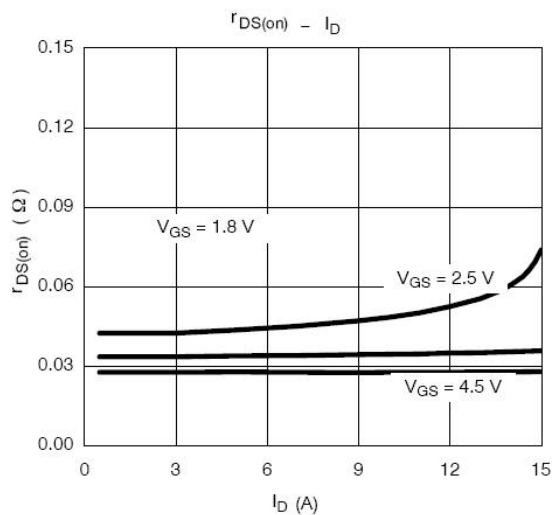
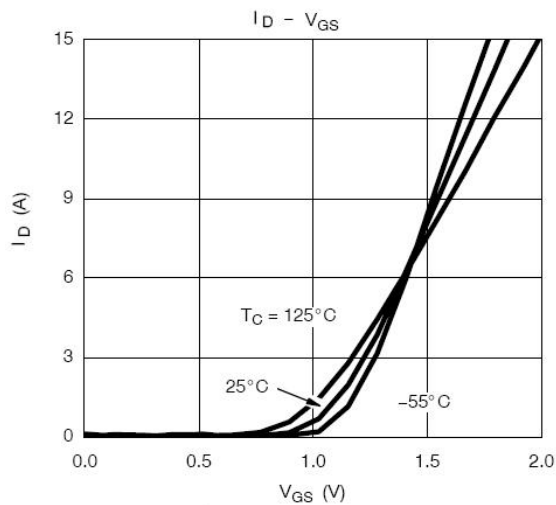
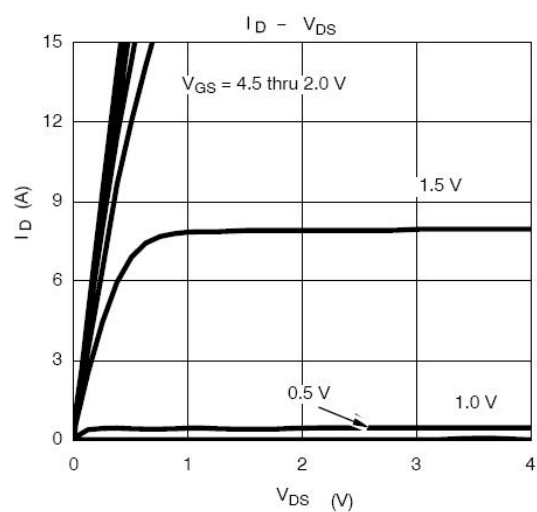
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DSS}	20	V
Gate-Source Voltage	V_{GSS}	± 8	V
Drain Current – Continuous	I_D	4.5	A
Pulsed Drain Current	I_{DM}	15	A
Continuous Source Current	I_S	1.0	A
Power Dissipation	P_D	1.25	W
Storage Temperature Range	T_{stg}	-55~150	°C
Junction-to-Ambient	$R_{\theta JA}$	100	°C/W

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	$V_{(BR)DSS}$	$V_{GS}=0V$ $I_D=-250\mu A$	20			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	0.5	0.65	1.2	V
Static Drain–Source On–Resistance	$R_{DS(on)1}$	$V_{GS}=4.5V$ $I_D=5A$		27	33	mΩ
	$R_{DS(on)2}$	$V_{GS}=2.5V$ $I_D=4.5A$		33	40	
	$R_{DS(on)3}$	$V_{GS}=1.8V$ $I_D=4A$		42	51	
Zero Gate Voltage Drain Current	$I_{DSS(1)}$	$V_{DS}=20V$ $V_{GS}=0V$			1	μA
	$I_{DSS(2)}$	$V_{DS}=20V$ $V_{GS}=0V$ $T_J=70^\circ C$			75	μA
Gate–Body Leakage.	I_{GSS}	$V_{GS}=\pm 8V$ $V_{DS}=0V$			± 100	nA
State Drain Current	$I_{D(ON)}$	$V_{DS}\geq 10V$ $V_{GS}=4.5V$	15			A
Drain–Source Diode Forward Voltage	V_{SD}	$I_S=1A$ $V_{GS}=0V$		0.8	1.2	V
Forward Transconductance	g_{FS}	$V_{DS}=15V$ $I_D=5A$		40		S
Total Gate Charge	Q_g	$V_{DS}=10V$ $V_{GS}=4.5V$ $I_D=5A$		11.2	14	nC
Gate–Source Charge	Q_{gs}			1.4		
Gate–Drain Charge	Q_{gd}			2.2		
Turn–On Delay Time	$t_{d(on)}$	$V_{DD}=10V$ $R_L=10\Omega$ $I_D\approx 1A$ $V_{GEN}=4.5V$ $R_G=6\Omega$		15	25	ns
Turn–On Rise Time	t_r			40	60	
Turn–Off Delay Time	$t_{d(off)}$			48	70	
Turn–Off Fall Time	t_f			31	45	
Source–Drain Reverse Recovery Time	t_{rr}	$I_F=1.0A$ $di/dt=100A/\mu s$		13	25	

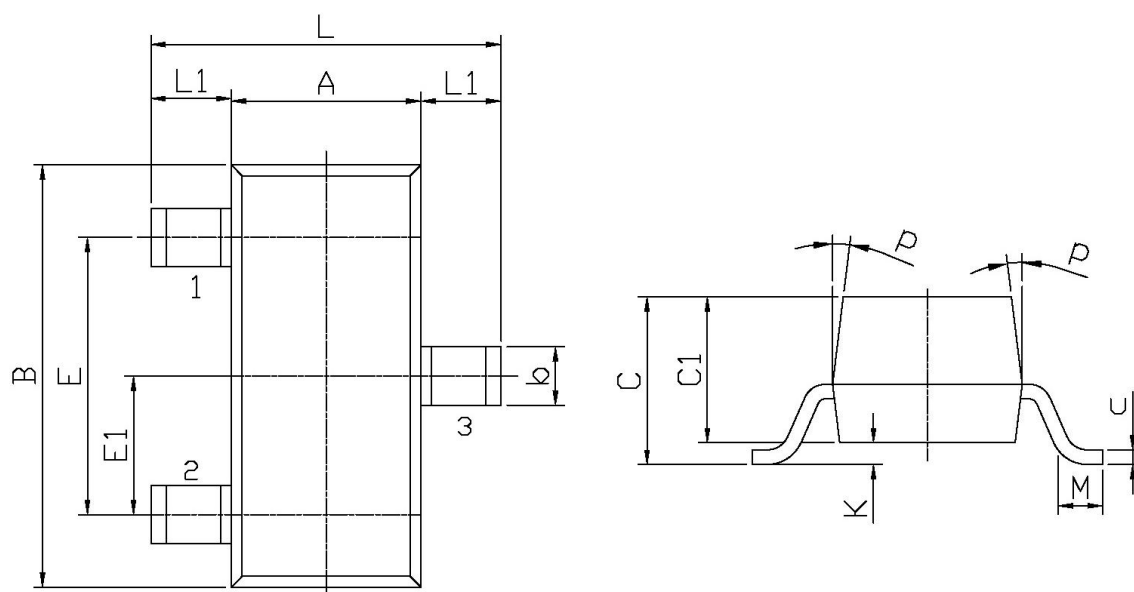
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

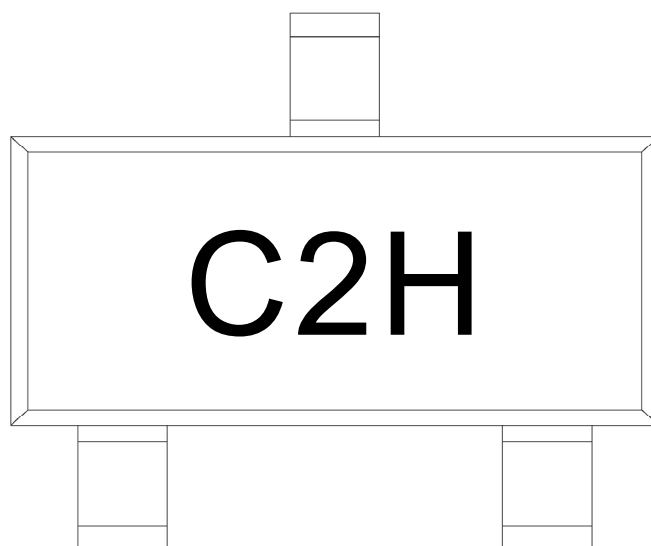
SOT-23

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

印章说明 / Marking Instructions



说明：

C2: 为型号代码

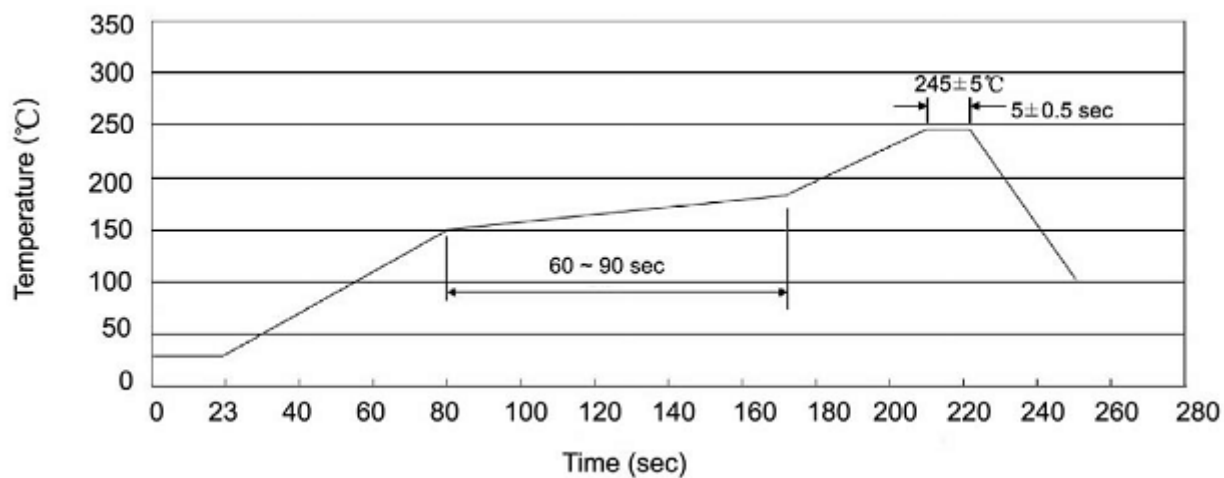
H: 为公司代码

Note:

C2 : Product Type

H: Company Code.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices