SI2306
Rev.E Mar.-2016

DATA SHEET

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,功率 MOS 晶体管。

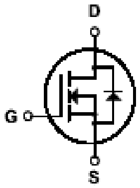
Trench FET Power MOSFET 100% Rg Tested.

用途 / Applications

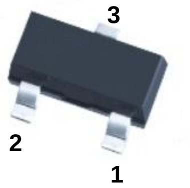
主要用于显示屏驱动。

Primarily the display screen drive applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : S PIN 2 : G PIN 3 : D

印章代码 / Marking

Marking	H306

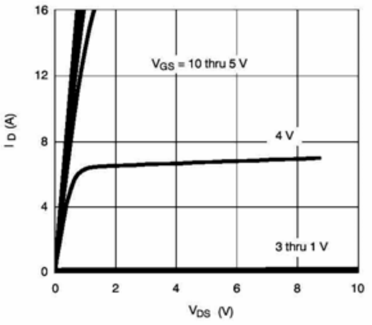
极限参数 / Absolute Maximum Ratings(Ta=25℃)

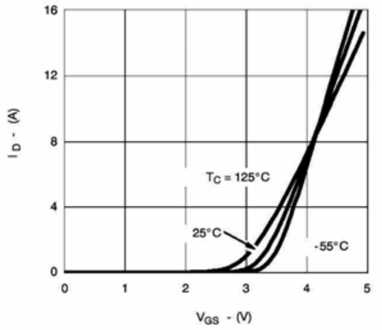
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	±15	V
Drain Current – Continuous	I_D	3.5	A
Drain Current – Continuous	$I_D(T_A=70℃)$	2.8	A
Pulsed Drain Current	I_{DM}	16	A
Continuous Source Current	I_S	1.25	A
Power Dissipation	P_D	1.25	W
Power Dissipation	$P_D(T_A=70℃)$	0.80	W
Storage Temperature Range	T_{stg}	-55 ~ 150	℃

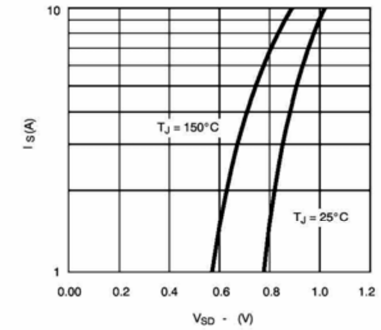
电性能参数 / Electrical Characteristics(Ta=25℃)

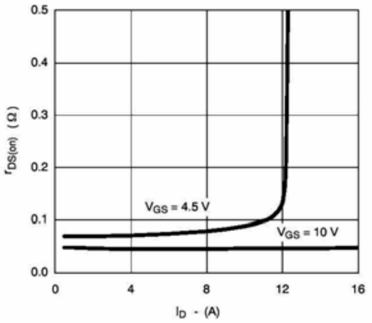
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V I_D=250μA	30			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	0.8			V
Static Drain–Source On–Resistance	$R_{DS(on)1}$	V_{GS}=10V I_D=3.5A		0.046	0.057	Ω
	$R_{DS(on)2}$	V_{GS}=4.5V I_D=2.8A		0.070	0.094	Ω
Zero Gate Voltage Drain Current	$I_{DSS(1)}$	V_{DS}=30V V_{GS}=0V			0.5	μA
	$I_{DSS(2)}$	V_{DS}=30V V_{GS}=0V T_j=55℃			10	μA
Gate–Body Leakage.	I_{GSS}	V_{GS}=±15V V_{DS}=0V			±0.1	μA
State Drain Current	$I_{D(1)}$	V_{DS}≥4.5V V_{GS}=10V	6.0			A
	$I_{D(2)}$	V_{DS}≥4.5V V_{GS}=4.5V	4.0			A
Drain–Source Diode Forward Voltage	V_{SD}	I_S=1.25A V_{GS}=0V		0.8	1.2	V
Forward Transconductance	g_{FS}	V_{DS}=4.5V I_D=3.5A		6.9		S
Gate Resistance	R_g		0.5		2.4	Ω
Input Capacitance	C_{iss}	V_{DS}=15V V_{GS}=0V f=1.0MHz		555		pF
Output Capacitance	C_{oss}			120		
Reverse Transfer Capacitance	C_{rss}			60		
Turn–On Delay Time	$t_{d(on)}$	V_{DD}=15V R_L=15Ω I_D≈1.0A V_{GEN}=10V R_G=6.0Ω		9.0	20	ns
Turn–On Rise Time	t_r			7.5	18	
Turn–Off Delay Time	$t_{d(off)}$			17	35	
Turn–Off Fall Time	t_f			5.2	12	

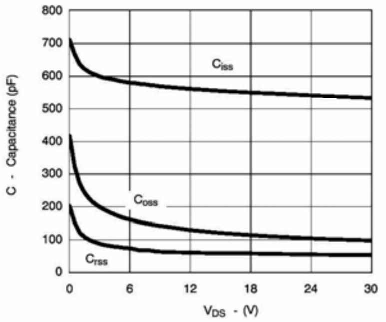
电参数曲线图 / Electrical Characteristic Curve

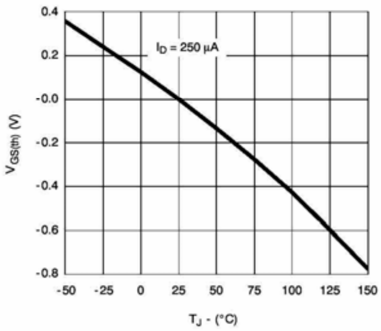


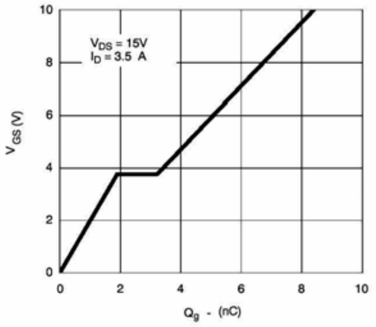


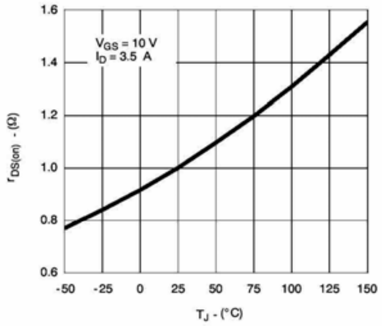


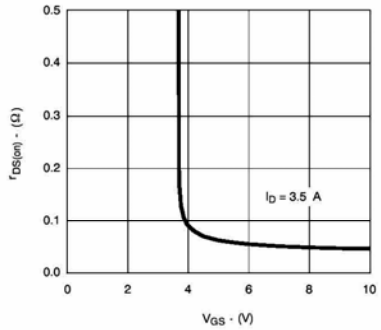


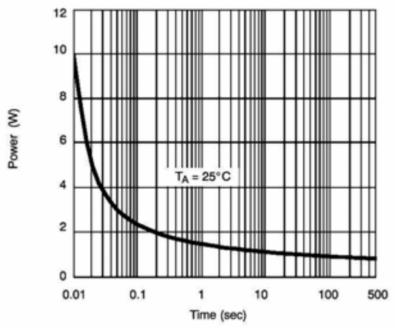






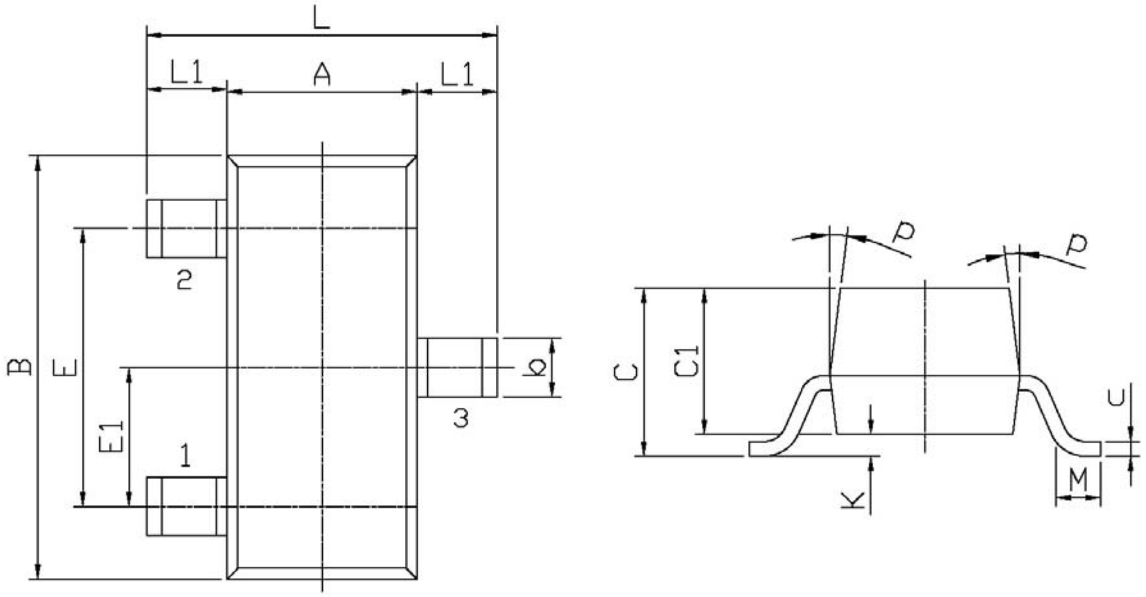






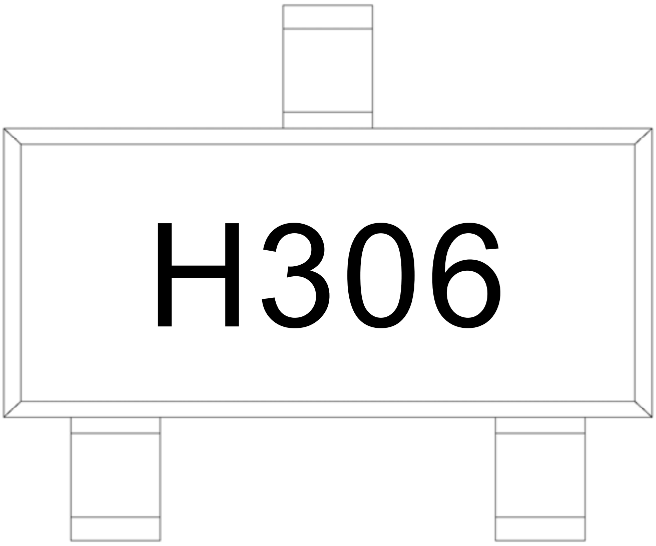
外形尺寸图 / Package Dimensions

SOT-23 单位：mm



Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	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：

H: 为公司代码

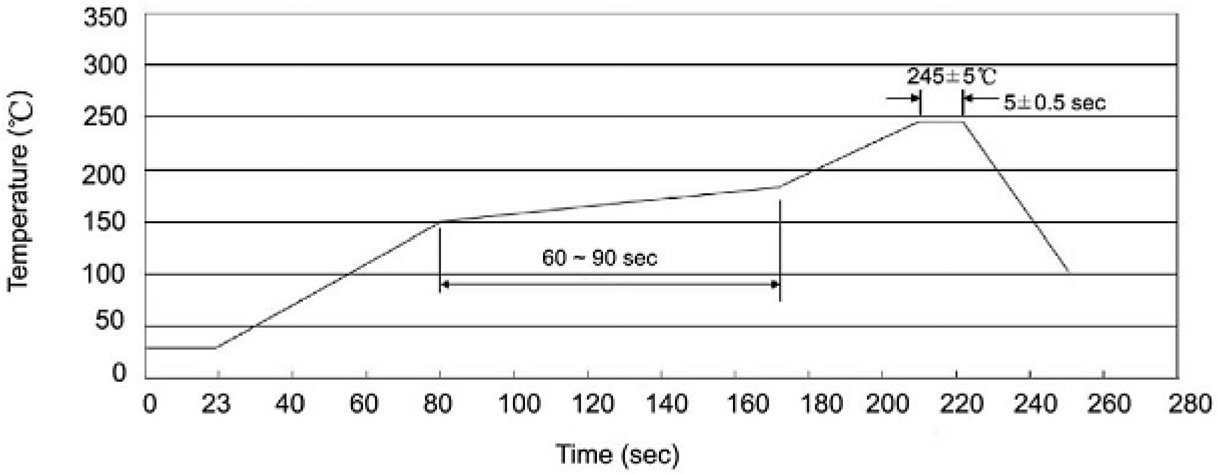
306: 为型号代码

Note:

H: Company Code.

306： Product Type

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



说明：	Note:
1、预热温度 25 ~ 150℃，时间 60 ~ 90sec;	1.Preheating:25~150℃, Time:60~90sec.
2、峰值温度 245±5℃，时间持续为 5±0.5sec;	2.Peak Temp.:245±5℃, Duration:5±0.5sec.
3、焊接制程冷却速度为 2 ~ 10℃/sec.	3. Cooling Speed: 2~10℃/sec.

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

温度：260±5℃　　时间：10±1 sec.　　Temp.:260±5℃　　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	8	240,000	7″ ×8	180×120×180	385×257×392

使用说明 / Notices