

描述 / Descriptions

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

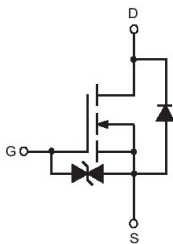
特征 / Features

输出电阻小、性能高；SOT-23 封装，利于设计安装，无卤产品。
Low $R_{DS(on)}$, rugged and reliable, compact industry standard SOT-23 surface mount package, HF product.

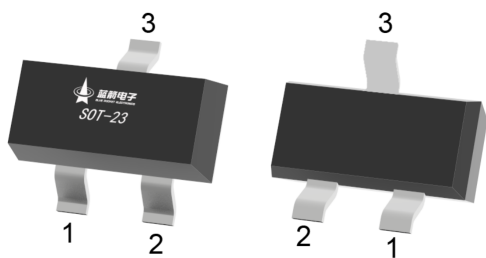
用途 / Applications

用于小电流伺服马达控制、功率 MOSFET 的门电压驱动及其它开关电路。
Low current applications such as small servo motor control, power MOSFET gate drivers, and other switching applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1 : G PIN 2 : S PIN 3 : D

印章代码 / Marking

见印章说明。
See Marking Instructions.

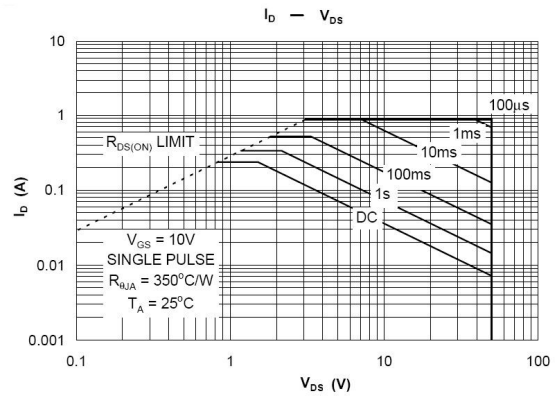
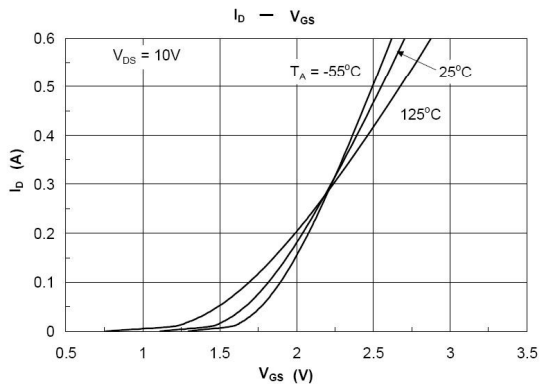
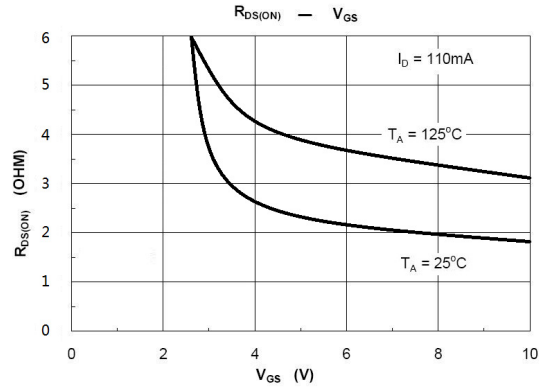
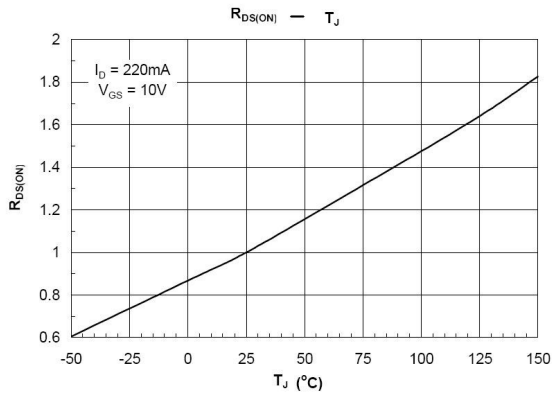
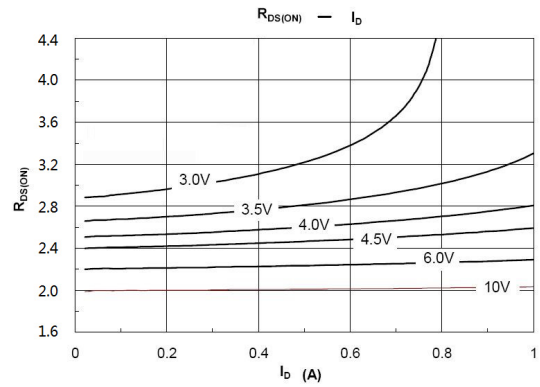
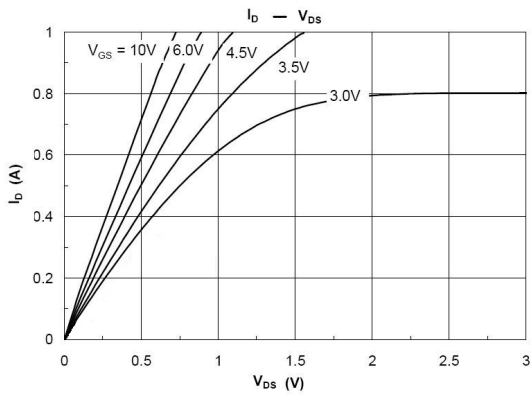
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V _{DSS}	50	V
Gate-Source Voltage	V _{GSS}	±20	V
Drain Current – Continuous	I _D	220	mA
Peak Drain Current	I _{DM}	880	mA
Power Dissipation	P _D	360	mW
Thermal Resistance, Junction-to-Ambient	R _{θJA}	350	°C/W
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	V _{DSS}	V _{GS} =0V I _D =250μA	50			V
Zero Gate Voltage Drain Current	I _{DSS(1)}	V _{GS} =0 V _{DS} =50V			0.5	μA
	I _{DSS(2)}	V _{GS} =0 V _{DS} =30V			0.1	μA
Gate–Body Leakage.	I _{GSS}	V _{DS} =0V V _{GS} =±20			±10	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =1.0mA	0.8	1.6	1.8	V
Static Drain–Source On–Resistance	R _{DS(on)(1)}	V _{GS} =10V I _D =220mA		1.9	3.5	Ω
	R _{DS(on)(2)}	V _{GS} =4.5V I _D =220mA		2.5	6.0	Ω
Forward Transconductance	g _{FS}	V _{DS} =10V I _D =220mA	0.12	0.5		S
Drain–Source Diode Forward Voltage	V _{SD}	V _{GS} =0V I _S =440mA		0.8	1.4	V
Input Capacitance	C _{iss}	V _{DS} =10V V _{GS} =0V f=1.0MHZ			50	pF
Output Capacitance	C _{oss}				25	
Reverse Transfer Capacitance	C _{rss}				8	
Gate Resistance	R _G	V _{GS} =15mV f=1.0MHZ		9		Ω
Turn–On Delay Time	t _{d(on)}	V _{DD} =30V I _D =290mA V _{GS} =10V R _{GEN} =25Ω		2.5	5	ns
Turn–On Rise Time	t _r			9	18	ns
Turn–Off Delay Time	t _{d(off)}			20	36	ns
Turn–Off Fall Time	t _f			7	14	ns

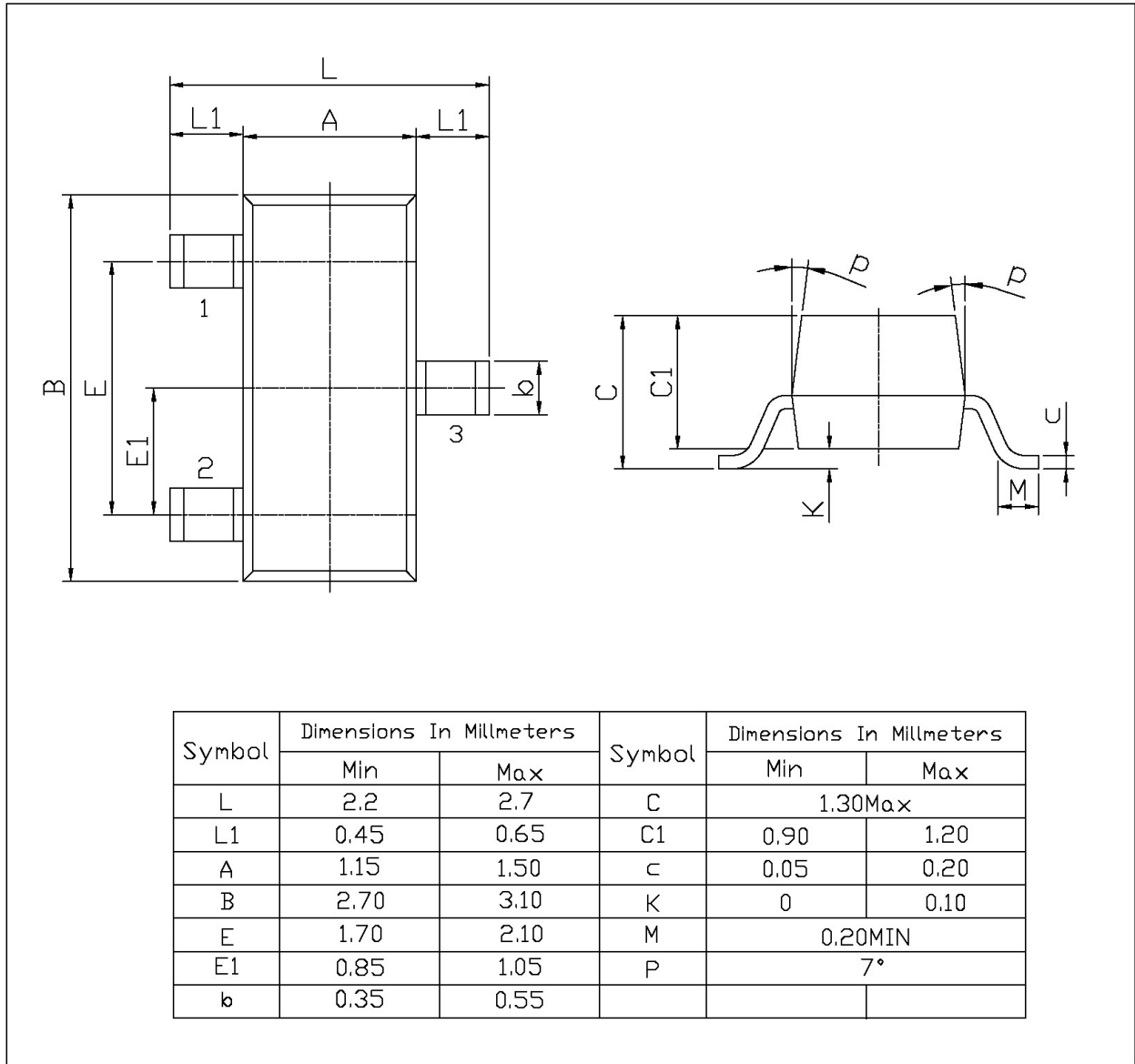
电参数曲线图 / Electrical Characteristic Curve



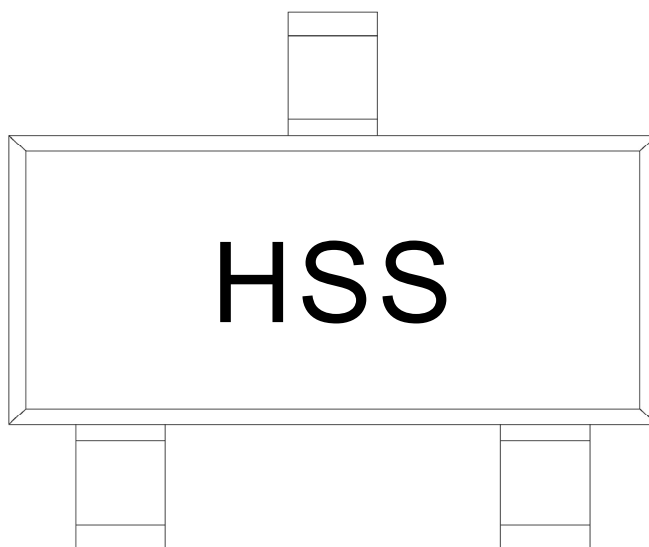
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

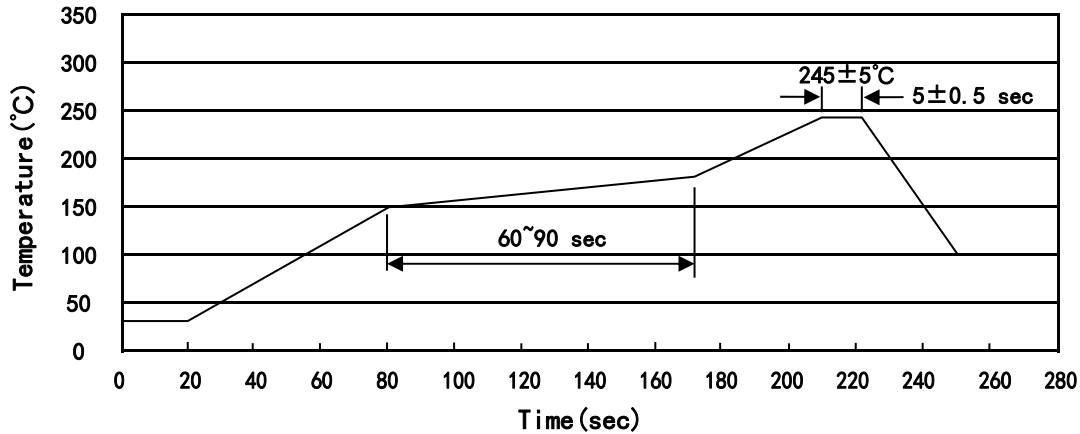
SS： 为型号代码

Note:

H: Company Code

SS: Product Type 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 150~180°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:150~180°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