

### 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

低导通电阻,开关速度快,低电压驱动,简化驱动电路和简便平面。

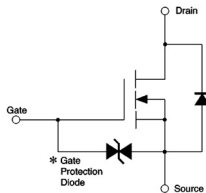
Low on-resistance, fast switching speed, low voltage drive, easily designed drive circuits, easy to parallel.

### 用途 / Applications

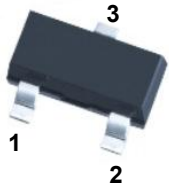
触摸屏, 交换开关。

Interfacing, switching.

### 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	KL
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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	$V_{DSS}$	30	V
Gate-Source Voltage	$V_{GSS}$	±20	V
Drain Current – Continuous	$I_D$	100	mA
Drain Current- Pulsed	$I_{DP}^{*1}$	200	mA
Reverse Drain Current – Continuous	$I_{DR}$	100	mA
Reverse Drain Current –Pulsed	$I_{DRP}^{*1}$	200	mA
Total Power Dissipation	$P_D^{*2}$	250	mW
Channel Temperature	$T_{ch}$	150	V
Storage Temperature Range	$T_{stg}$	-55~150	°C

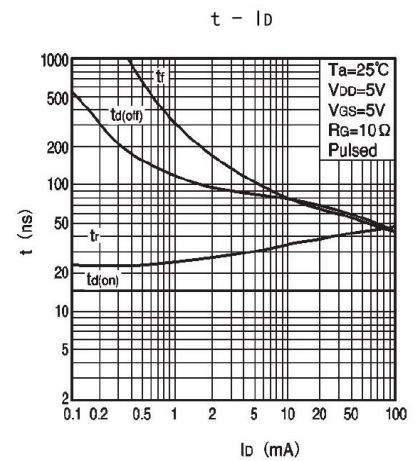
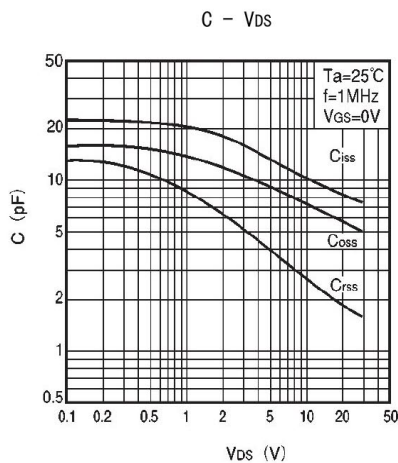
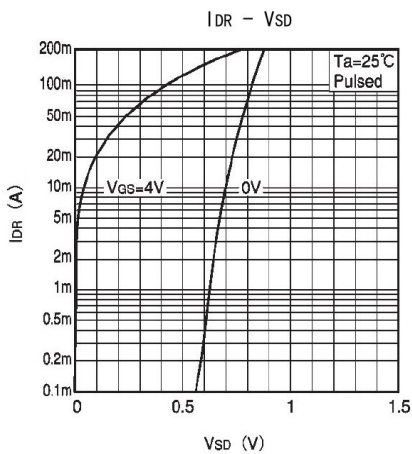
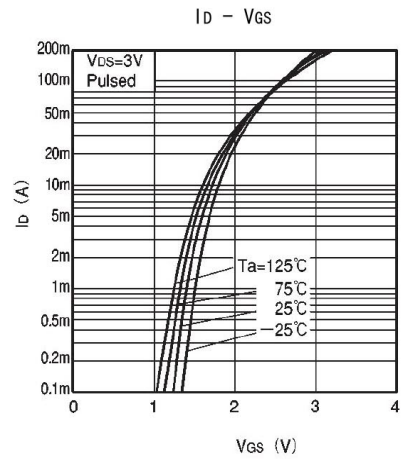
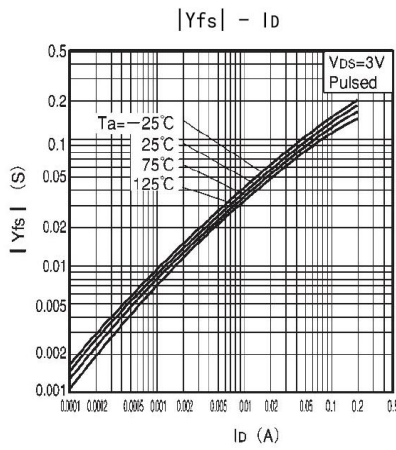
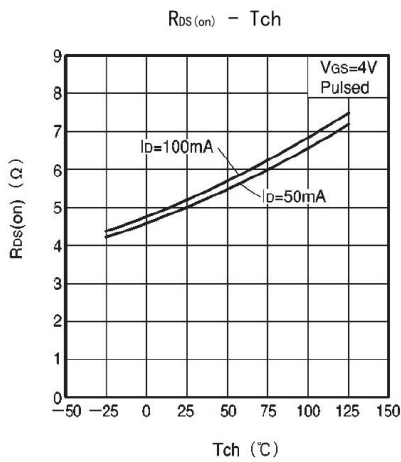
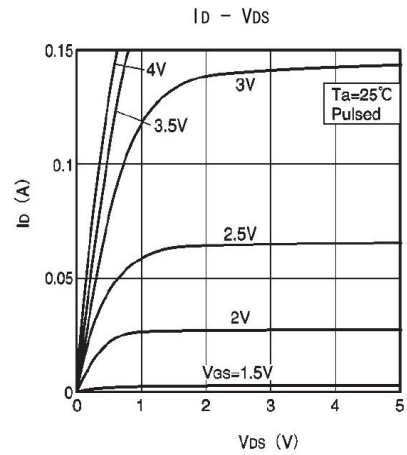
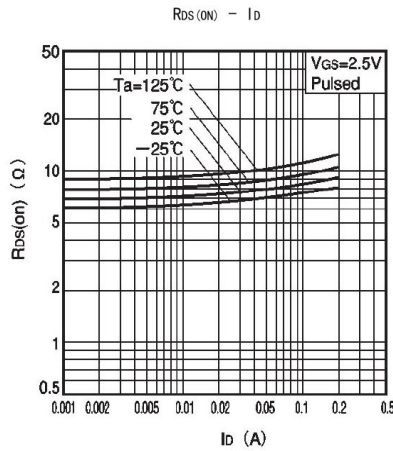
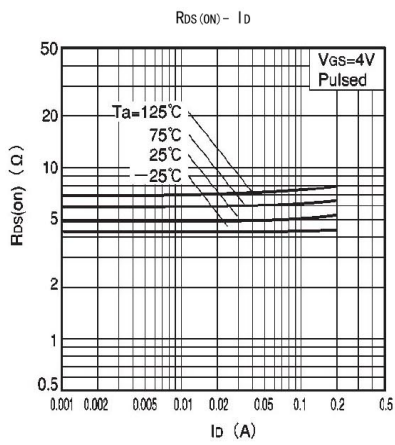
\*1: $P_w \leq 10\mu s$ , Duty cycle ≤ 50%

\*2:With each pin mounted on the recommended lands

**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	$V_{(BR)DSS}$	$V_{GS}=0V$ $I_D=10\mu A$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=3.0V$ $I_D=100\mu A$	0.8		1.5	V
Static Drain–Source On–Resistance	$R_{DS(on)1}$	$V_{GS}=4.0V$ $I_D=10mA$		5.0	8.0	Ω
	$R_{DS(on)2}$	$V_{0047S}=2.5V$ $I_D=1.0mA$		7.0	13	
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=30V$ $V_{GS}=0V$			1.0	μA
Gate–Body Leakage.	$I_{GSS}$	$V_{GS}=\pm 20V$ $V_{DS}=0V$			±1	μA
Forward Transconductance	$g_{FS}$	$V_{DS}=3V$ $I_D=10mA$	20			mS
Input Capacitance	$C_{iss}$	$V_{DS}=5.0V$ $V_{GS}=0V$ $f=1.0MHz$		13		pF
Output Capacitance	$C_{oss}$			9.0		
Reverse Transfer Capacitance	$C_{rss}$			4.0		
Turn–On Delay Time	$t_{d(on)}$	$I_D=10mA$ $V_{DD}\approx 5.0V$ $V_{GS}=5.0V$ $R_L=500\Omega$ $R_{GS}=10\Omega$		15		ns
Turn–On Rise Time	$t_r$			35		
Turn–Off Delay Time	$t_{d(off)}$			80		
Turn–Off Fall Time	$t_f$			80		

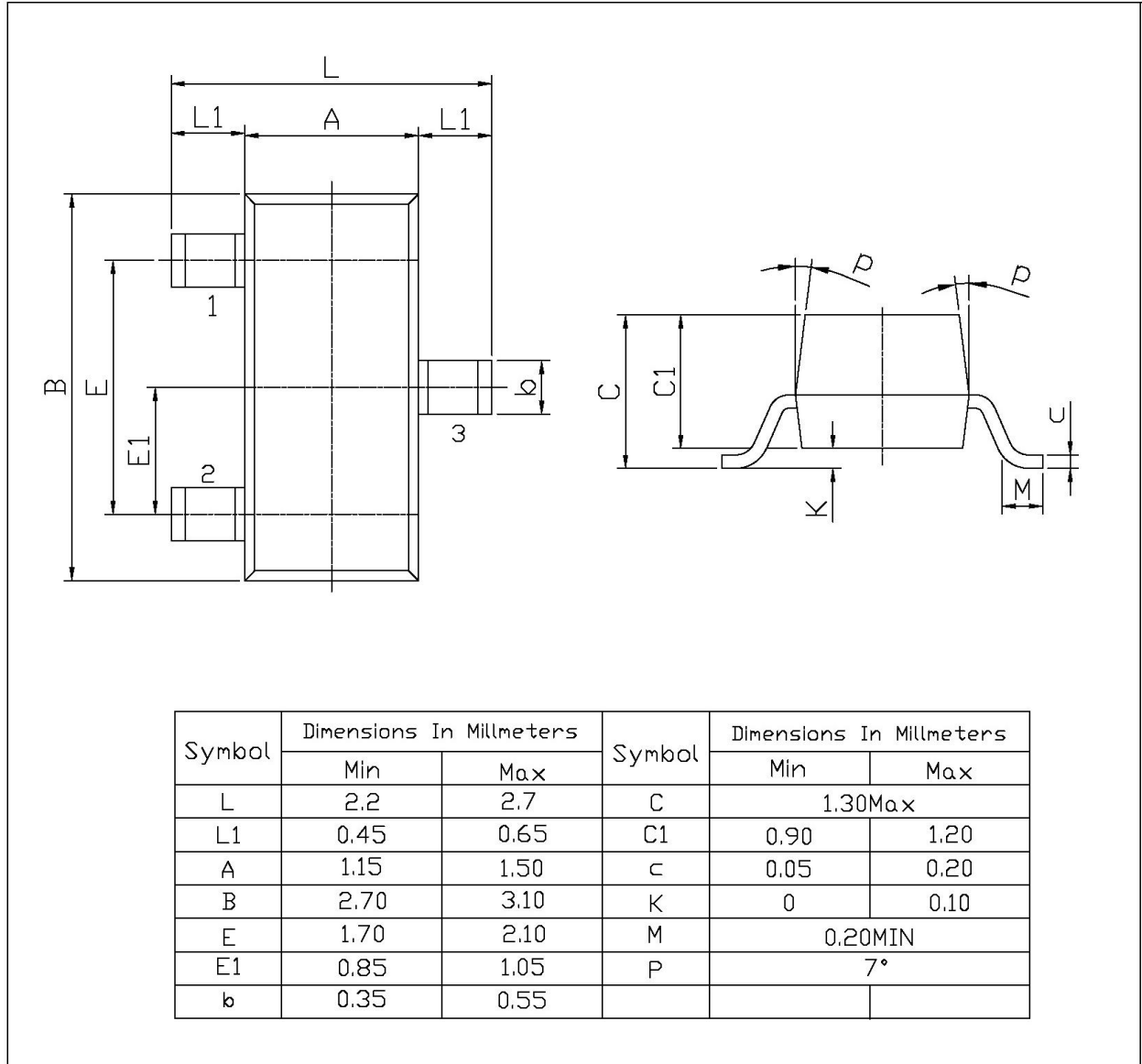
电参数曲线图 / Electrical Characteristic Curve



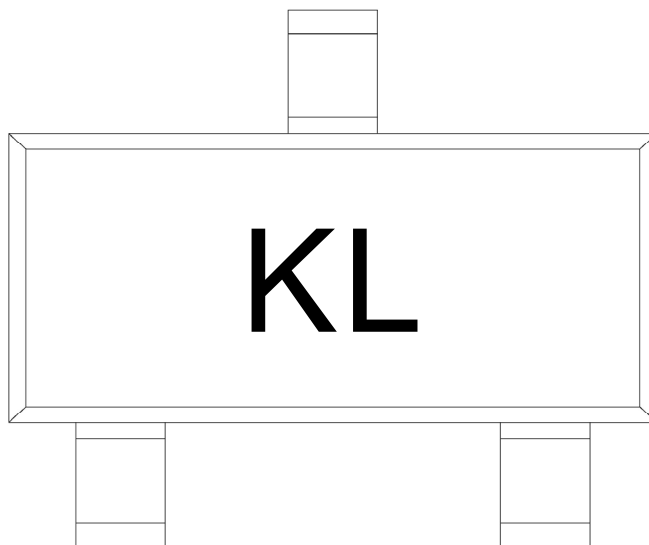
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

KL： 为封装型号

Note:

KL : Package Type

**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 <sup>3</sup> )		
	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**