

描述 / Descriptions

SOT-23 塑封封装 P 道 MOS 场效应管。

P- CHANNEL MOSFET in a SOT-23 Plastic Package.

特征 / Features

$V_{DS} = -60V$; $I_D = -1.8A$

$R_{DS(on)} @ -10V \leq 200m\Omega$ (Type.180m Ω)

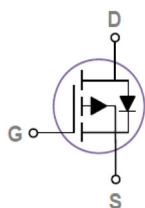
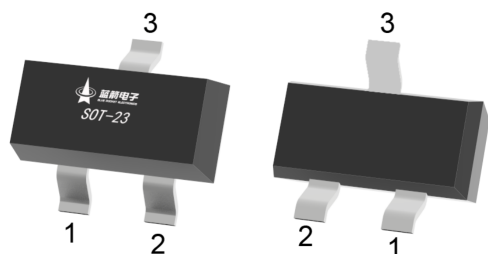
$R_{DS(on)} @ -4.5V \leq 280m\Omega$ (Type.220m Ω)

无卤产品。HF Product.

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 : G

PIN 2 : S

PIN 3 : D

印章代码 / Marking

Marking	C9H
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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}	-60	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current – Continuous	$I_D(T_C=25^\circ\text{C})$	-1.8	A
Pulsed Drain Current	I_{DM}	-7.5	A
Power Dissipation	P_D	1.2	W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^\circ\text{C}$
Junction-to-Ambient	$R_{\theta JA}$	104	$^\circ\text{C/W}$

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	$V_{(BR)DSS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-60			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1.0		-2.5	V
Static Drain–Source On–Resistance	$R_{DS(on)1}$	$V_{GS}=-10V$ $I_D=-1.0A$		180	200	m Ω
	$R_{DS(on)2}$	$V_{GS}=-4.5V$ $I_D=-1.0A$		220	280	m Ω
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-60V$ $V_{GS}=0V$			1	μA
Gate–Body Leakage.	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Drain–Source Diode Forward Voltage	V_{SD}	$I_S=-1A$ $V_{GS}=0V$			-1.2	V
Gate Resistance	R_g			11		Ω
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		620		pF
Output Capacitance	C_{oss}			30		
Reverse Transfer Capacitance	C_{rss}			22		
Total Gate Charge	$Q_{g(-10V)}$	$V_{GS}=-10V$ $V_{DS}=-30V$ $I_D=-2A$		11.7		nC
Total Gate Charge	$Q_{g(-4.5V)}$			4.7		
Gate Source Charge	Q_{gs}			0.8		
Gate Drain Charge	Q_{gd}			1.4		

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
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $V_{DS}=-30V$ $I_D=-2A$ $R_{GEN}=3\Omega$		6.4		ns
Turn-On Rise Time	t_r			3.2		
Turn-Off Delay Time	$t_{d(off)}$			26.4		
Turn-Off Fall Time	t_f			6.0		

电参数曲线图 / Electrical Characteristic Curve

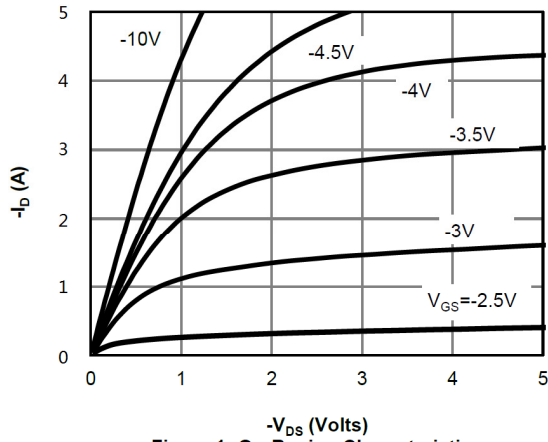


Figure 1: On-Region Characteristics

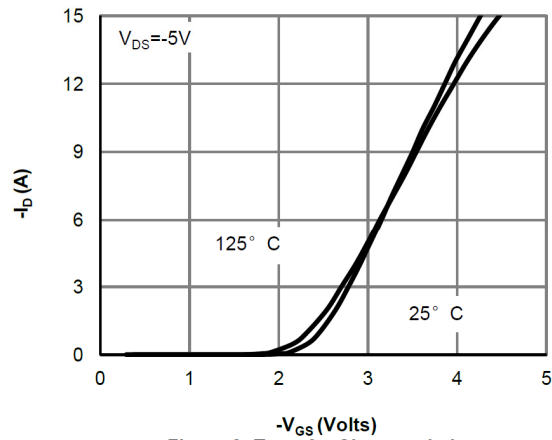


Figure 2: Transfer Characteristics

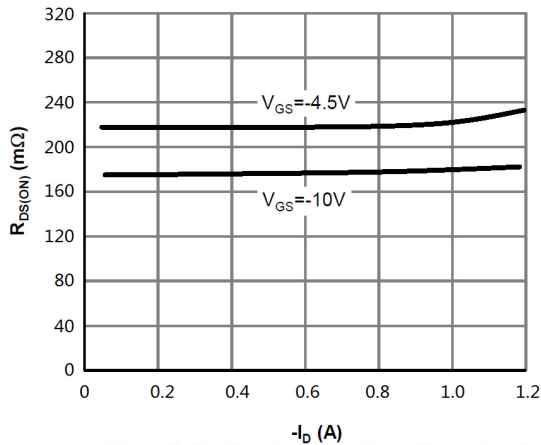


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

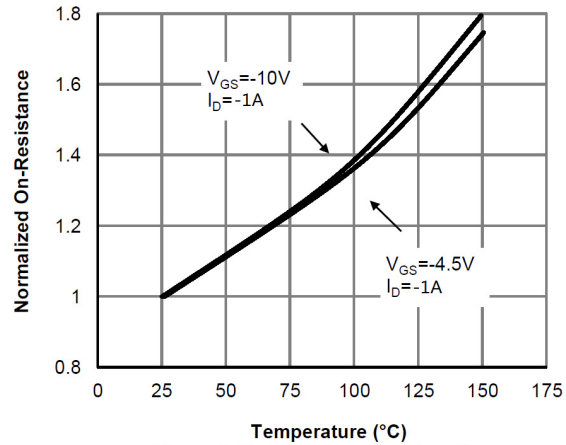


Figure 4: On-Resistance vs. Junction Temperature

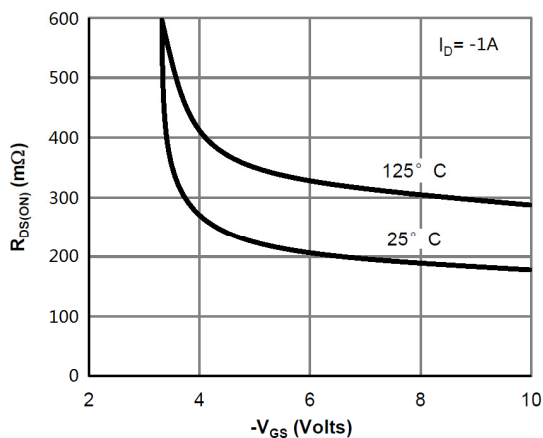


Figure 5: On-Resistance vs. Gate-Source Voltage

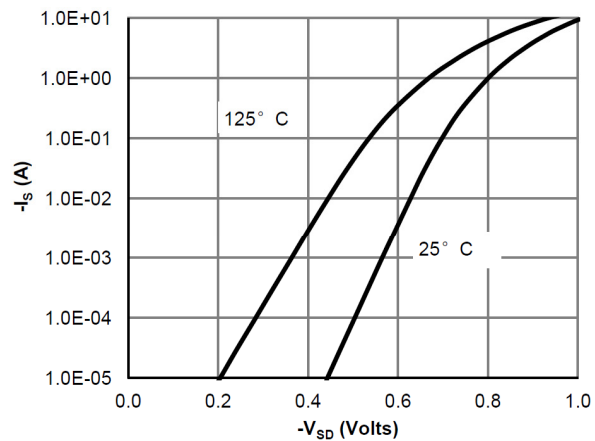


Figure 6: Body-Diode Characteristics

电参数曲线图 / Electrical Characteristic Curve

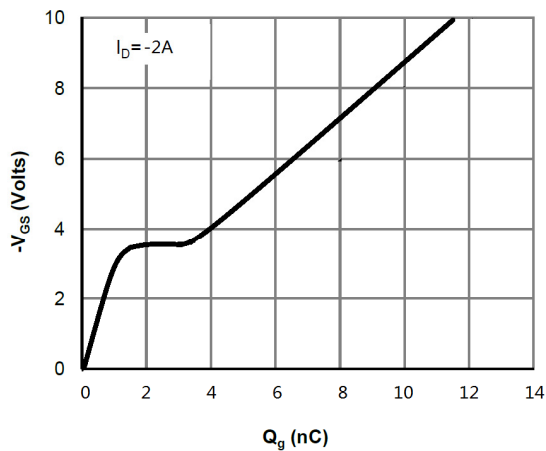


Figure 7: Gate-Charge Characteristics

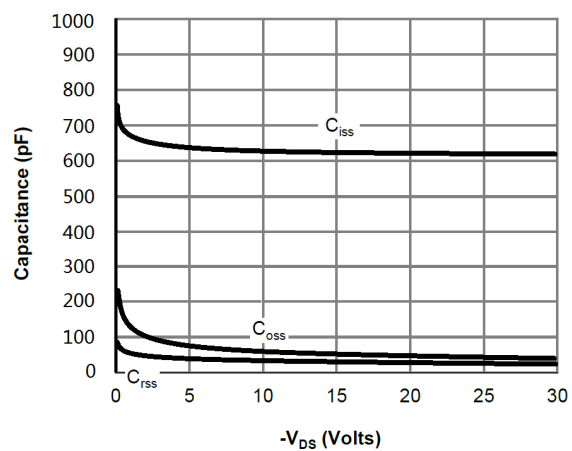


Figure 8: Capacitance Characteristics

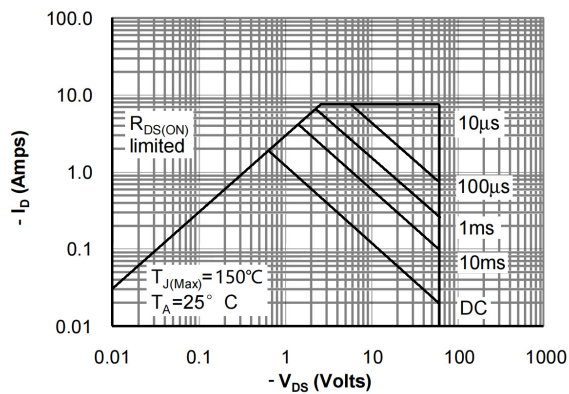


Figure 9: Maximum Forward Biased Safe Operating Area

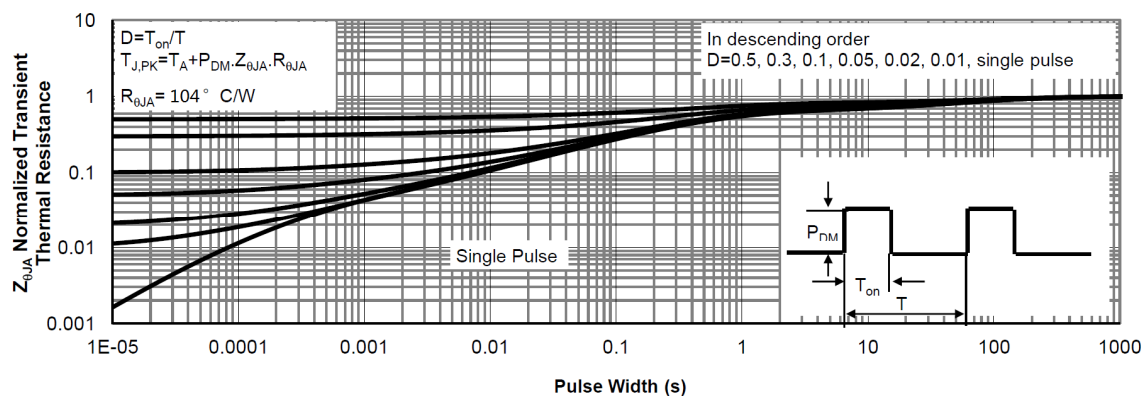
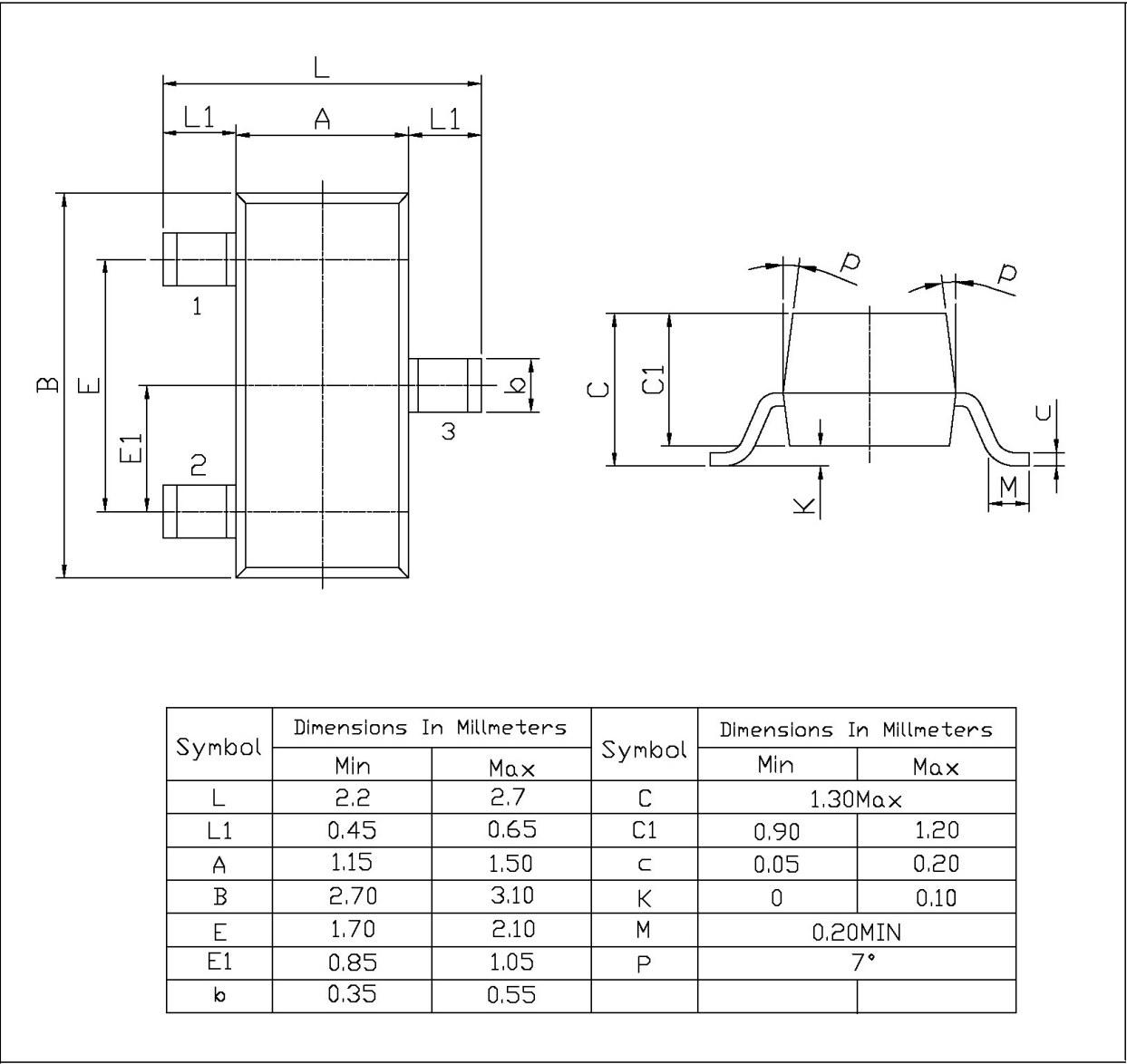


Figure 10: Normalized Maximum Transient Thermal Impedance

外形尺寸图 / Package Dimensions

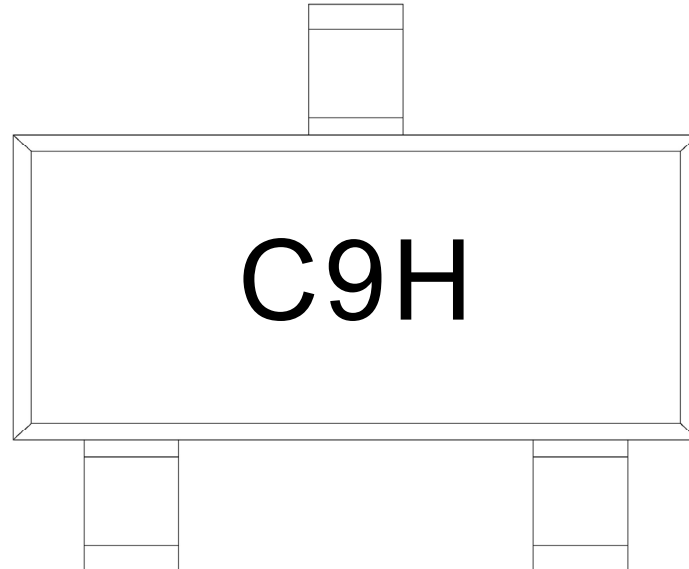
SOT-23

单位：mm





印章说明 / Marking Instructions



说明：

H： 为公司代码

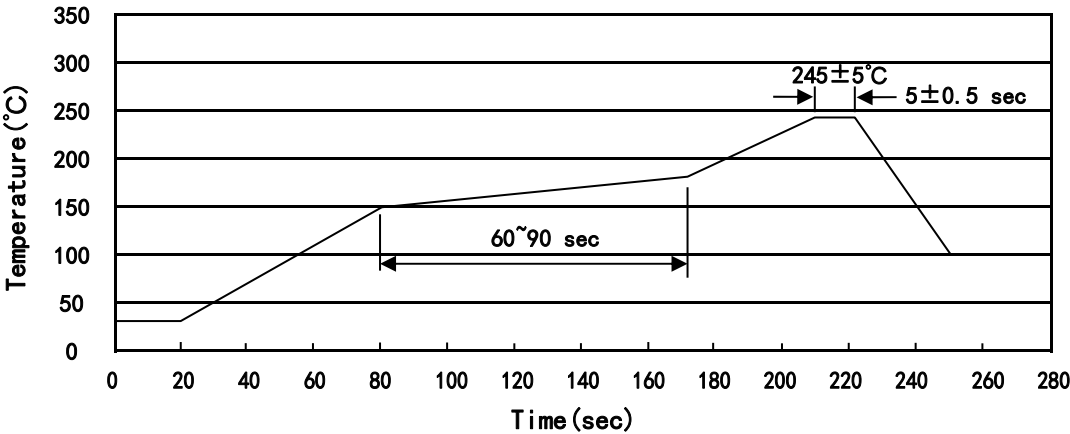
C9： 为型号代码

Note:

H: Company Code

C9: 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℃，时间 60~90sec;
- 2、峰值温度 245±5℃，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10℃/sec.

Note:

- 1.Preheating:150~180℃, Time:60~90sec.
- 2.Peak Temp.:245±5℃, Duration:5±0.5sec.
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	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices

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