

BRCS2301MA

Rev.E Oct.-2023

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

芯片采用超高密度元胞设计技术， $R_{DS(ON)}$ 导通电阻小，SOT-23 封装，无卤产品。

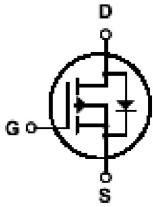
Super high dense cell design for low $R_{DS(ON)}$, SOT-23 package, HF Product.

用途 / Applications

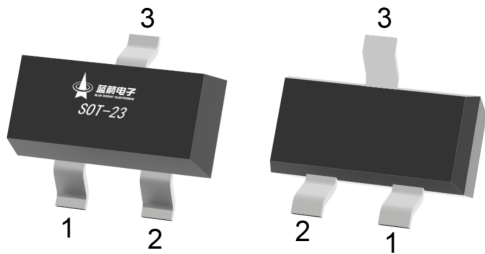
主要用于显示屏驱动。

Primarily the display screen drive applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1 : G

PIN 2 : S

PIN 3 : D

印章代码 / Marking

Marking	A1H
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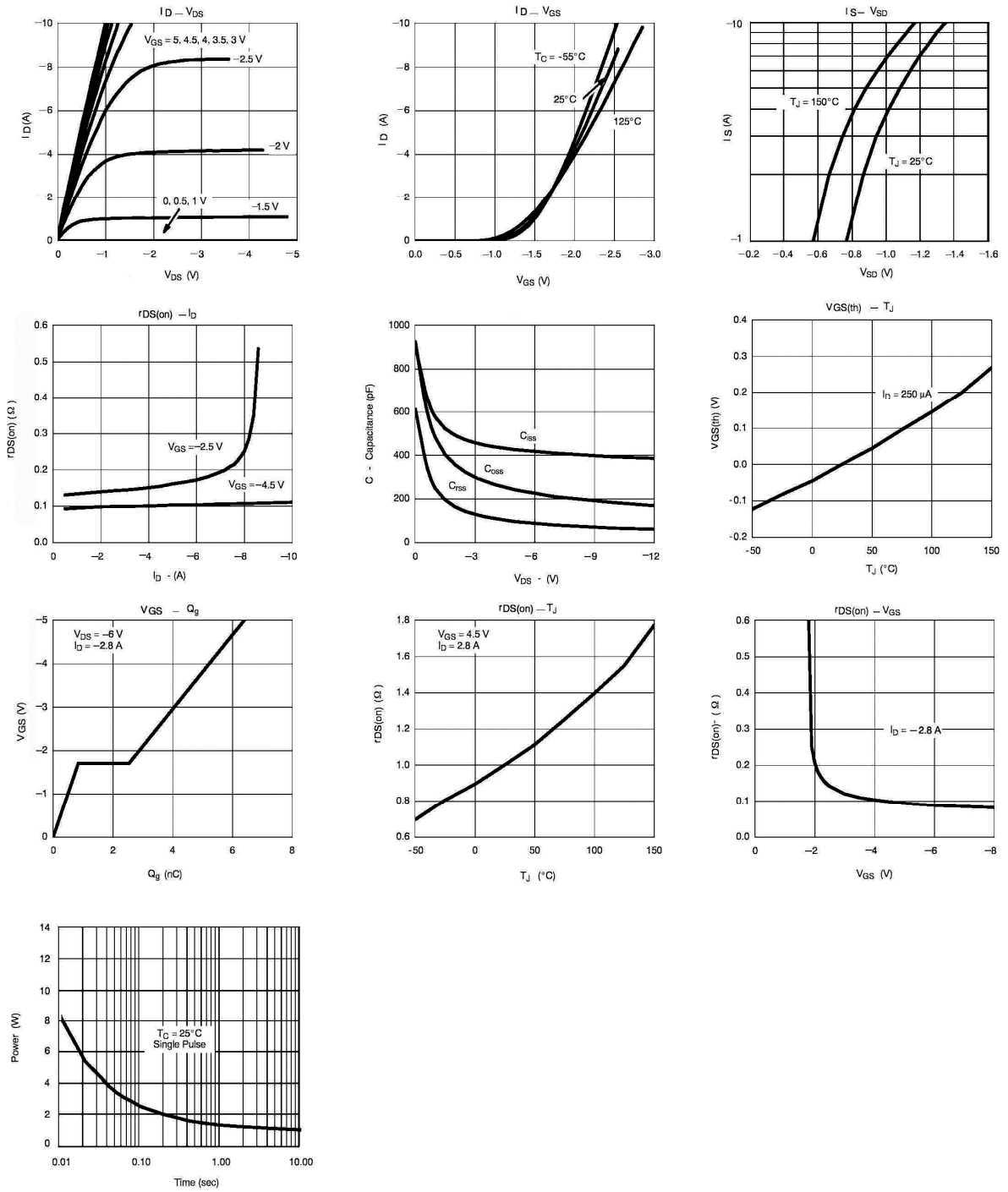
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V _{DSS}	-20	V
Gate-Source Voltage	V _{GSS}	±12	V
Drain Current – Continuous	I _D	-2.8	A
Drain Current – Continuous	I _D (T _A =70°C)	-1.5	A
Pulsed Drain Current	I _{DM}	-10	A
Continuous Source Current (Diode Conduction)	I _S	-1.6	A
Power Dissipation	P _D	1.25	W
Power Dissipation	P _D (T _A =70°C)	0.8	W
Storage Temperature Range	T _{stg}	-55~+150	°C
Operating Junction Temperature Range	T _j	-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 _{(BR)DSS}	V _{GS} =0V I _D =-250μA	-20	-23		V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250μA	-0.45		-0.95	V
Static Drain–Source On–Resistance	R _{DSON1}	V _{GS} =-4.5V I _D =-2.8A		0.068	0.13	Ω
	R _{DSON2}	V _{GS} =-2.5V I _D =-2.0A		0.096	0.19	Ω
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 =55°C			-10	μA
Gate–Body Leakage	I _{GSS}	V _{GS} =±12V V _{DS} =0V			±0.1	μA
Drain–Source Diode Forward Voltage	V _{SD}	I _S =-1.6A V _{GS} =0V		-0.8	-1.2	V
Forward Transconductance	g _{FS}	V _{DS} =-5V I _D =-2.8A		6.5		S
Input Capacitance	C _{iss}	V _{DS} =-6V, V _{GS} =0V f=1MHz		620		pF
Output Capacitance	C _{oss}			390		
Reverse Transfer Capacitance	C _{rss}			230		
Turn–On Delay Time	t _{d(on)}	V _{DD} =-6V R _L =6Ω I _D ≈-1A R _G =6Ω V _{GEN} =-4.5V		13	25	ns
Turn–On Rise Time	t _r			36	60	
Turn–Off Delay Time	t _{d(off)}			42	70	
Turn–Off Fall Time	t _f			34	60	

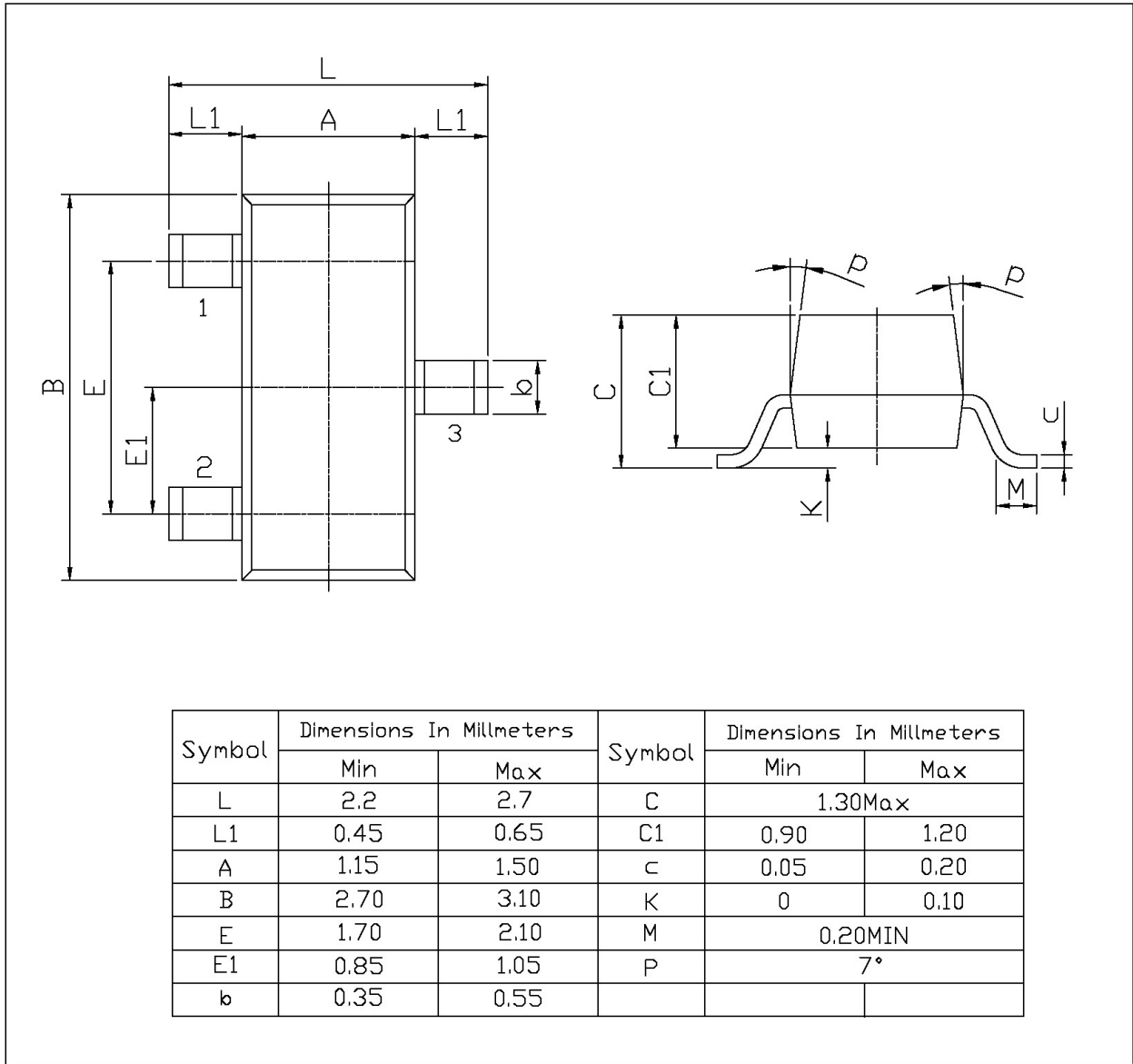
电参数曲线图 / Electrical Characteristic Curve



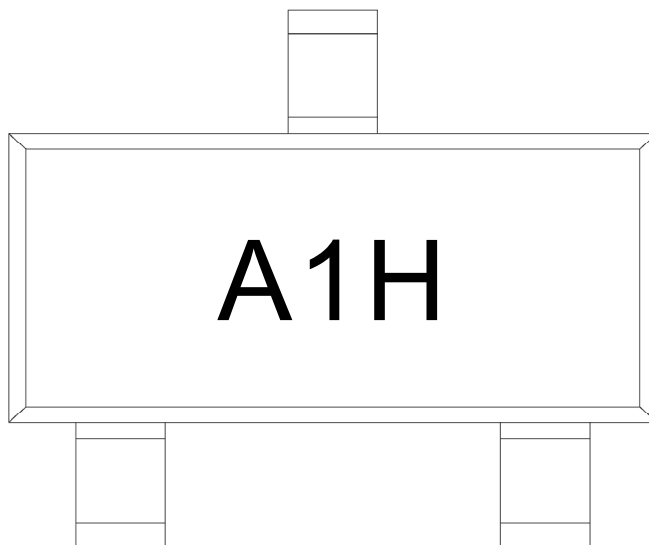
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

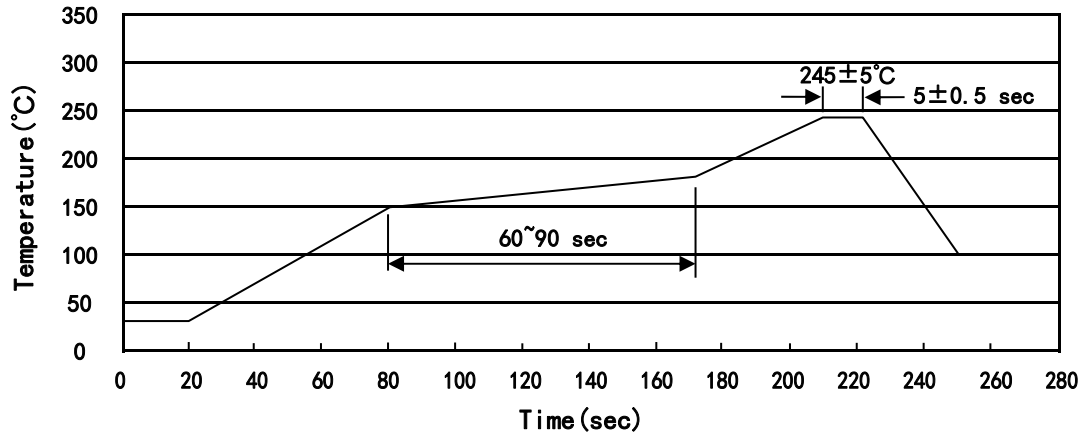
A1: 为型号代码

H: 为公司代码

Note:

A1 : Product Type Code

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 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