

# S8050M(BR3DG8050M)

Rev.C Feb.-2015

## 描述 / Descriptions

SOT-23 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-23 Plastic Package.

## 特征 / Features

与 S8550M(BR3CG8550M)互补。

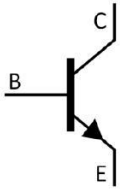
Complementary pair with S8550M(BR3CG8550M).

## 用途 / Applications

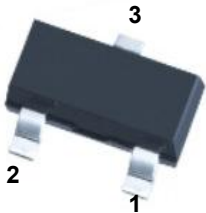
用于功率放大电路。

Power amplifier applications.

## 内部等效电路 / Equivalent Circuit



## 引脚排列 / Pinning



PIN1 : Emitter

PIN 2 : Base

PIN 3 : Collector

## 放大及印章代码 / $h_{FE}$ Classifications & Marking

$h_{FE}$ Classifications Symbol	B	C	D
$h_{FE}$ Range	85~160	120~200	160~300
Marking	HY3B	HY3C	HY3D

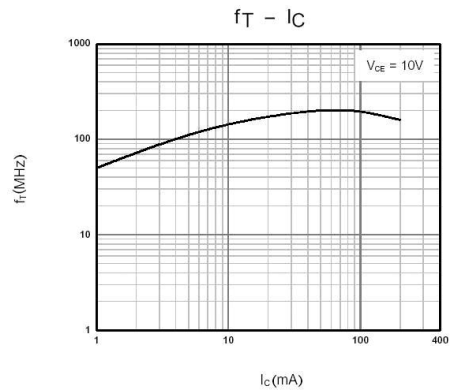
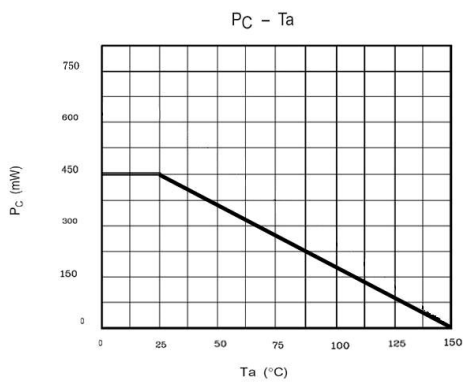
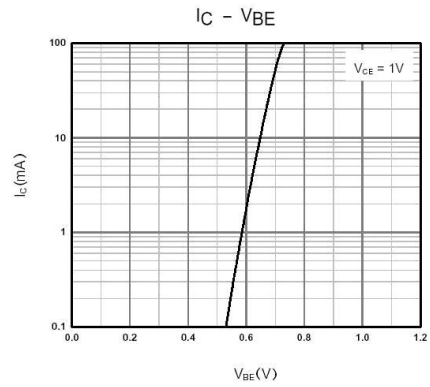
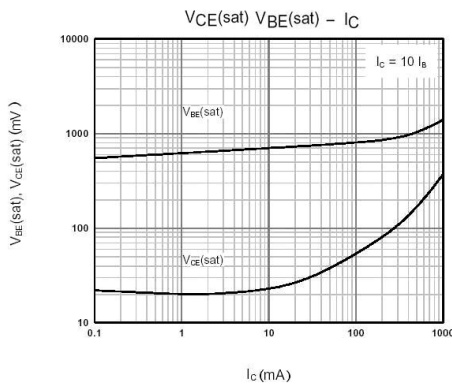
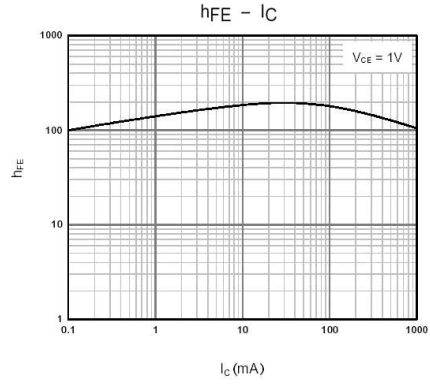
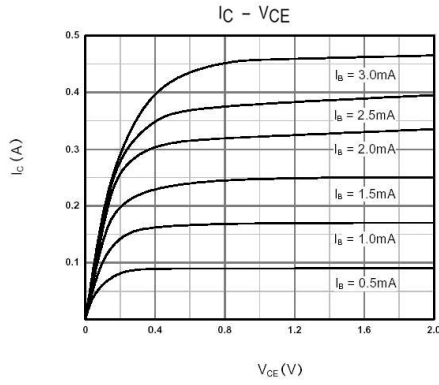
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	$V_{CBO}$	40	V
Collector to Emitter Voltage	$V_{CEO}$	25	V
Emitter to Base Voltage	$V_{EBO}$	6.0	V
Collector Current	$I_C$	800	mA
Base Current	$I_B$	200	mA
Collector Power Dissipation	$P_C$	450	mW
Junction Temperature	$T_j$	150	°C
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
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=0.1mA$ $I_E=0$	40			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=2.0mA$ $I_B=0$	25			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=0.1mA$ $I_C=0$	6.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=35V$ $I_E=0$			0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=6.0V$ $I_C=0$			0.1	$\mu A$
Forward Current Transfer Ratio <sub>(1)</sub>	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=100mA$	85		300	
Forward Current Transfer Ratio <sub>(2)</sub>	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=500mA$	40			
Forward Current Transfer Ratio <sub>(3)</sub>	$h_{FE(3)}$	$V_{CE}=1.0V$ $I_C=5.0mA$	45			
Collector-Emitter Saturation voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$		0.28	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-500mA$ $I_B=-50mA$		0.98	1.2	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=1.0V$ $I_C=10mA$		0.66	1.0	V
Transition Frequency	$f_T$	$V_{CE}=10V$ $I_C=50mA$	100	190		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		9.0		pF

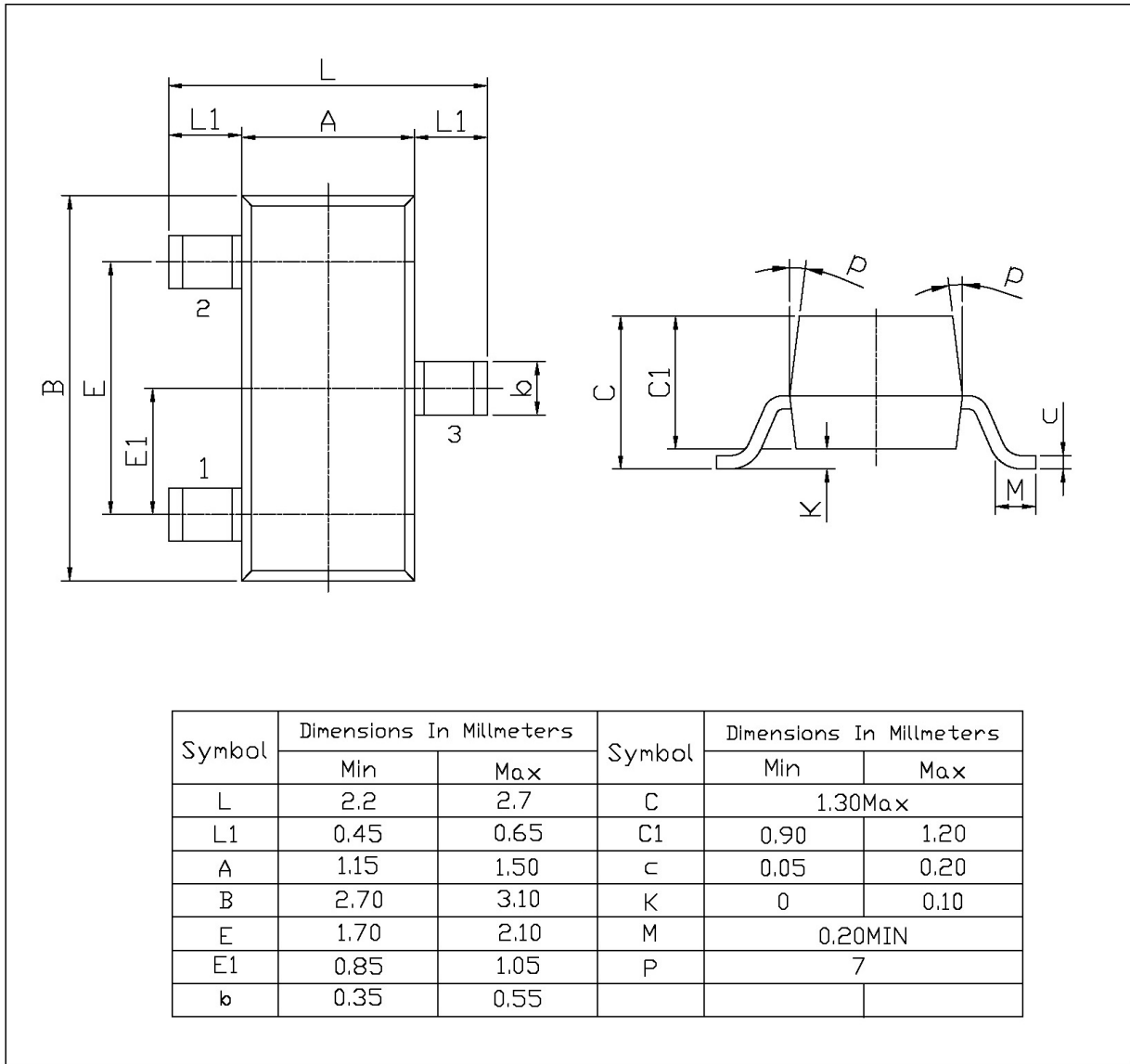
## 电参数曲线图 / Electrical Characteristic Curve



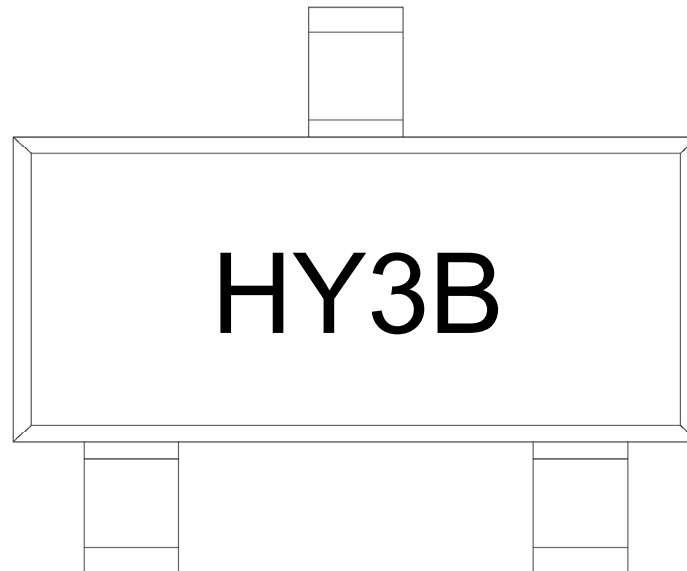
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

Y3： 为型号代码

B： 为  $h_{FE}$  档次代码

Note:

H： Company Code

Y3： Product Type

B：  $h_{FE}$  Classifications Symbol

**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：270±5°C

时间：10±1 sec.

Temp.:270±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/盒	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**