

BR3CG5350TA

Rev.A Sep.-2022

描述 / Descriptions

SOT-89 塑封封装 PNP 半导体三极管。

Silicon PNP transistor in a SOT-89 Plastic Package.

特征 / Features

饱和压降低，电流大，无卤产品。

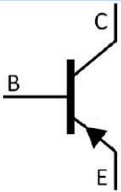
Low $V_{CE(sat)}$, high current, HF product.

用途 / Applications

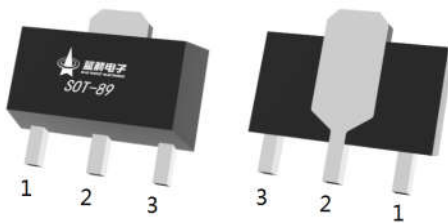
用于一般静音开关，液晶显示器的背景照明，线性开关电源。

General purpose switching and muting, LCD back-lighting, supply line switching circuits.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base

PIN 2 : Collector

PIN 3 : Emitter

印章代码 / Marking

Marking

HS46 *
*

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} | -50 | V |
| Collector to Emitter Voltage | V_{CEO} | -50 | V |
| Emitter to Base Voltage | V_{EBO} | -5 | V |
| Collector Current - Continuous | I_C | -3 | A |
| Peak collector current | I_{CM} | -5 | A |
| Collector Base - Continuous | I_B | -0.5 | A |
| Total power dissipation(注) | $P_{tot(注)}$ | 550 | mW |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{stg} | -65~150 | °C |

注：器件安装在印刷电路板上。

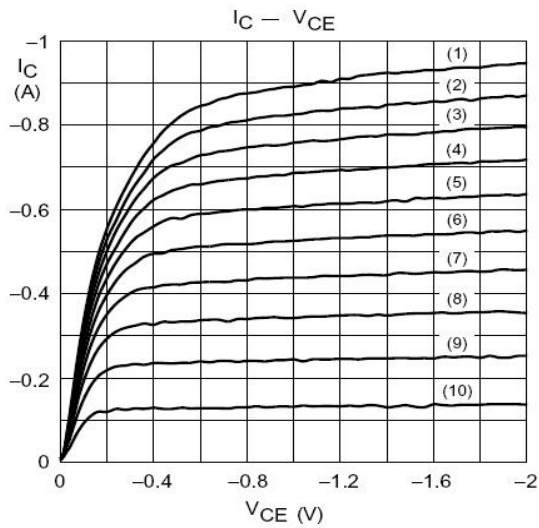
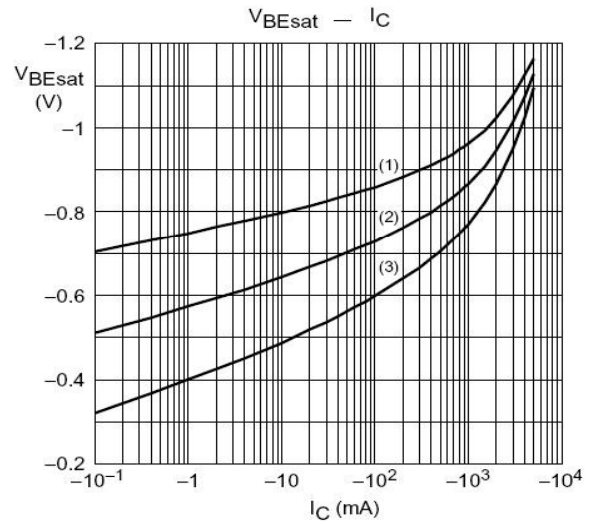
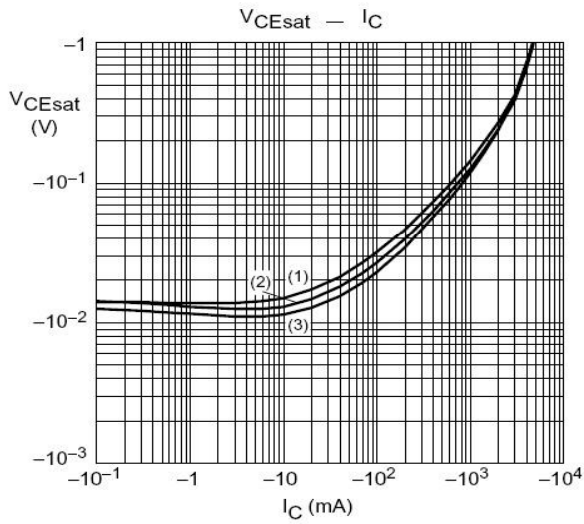
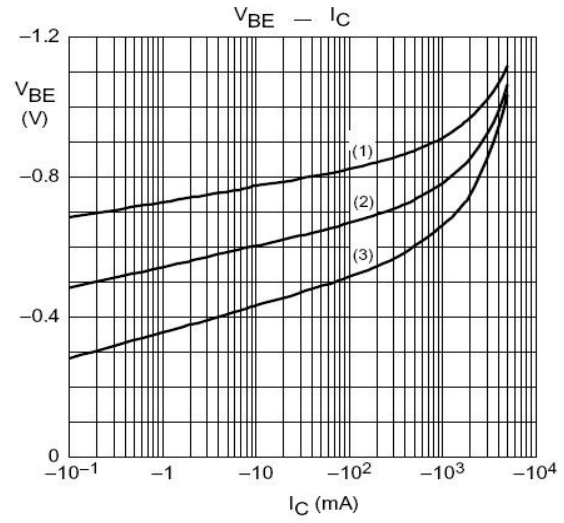
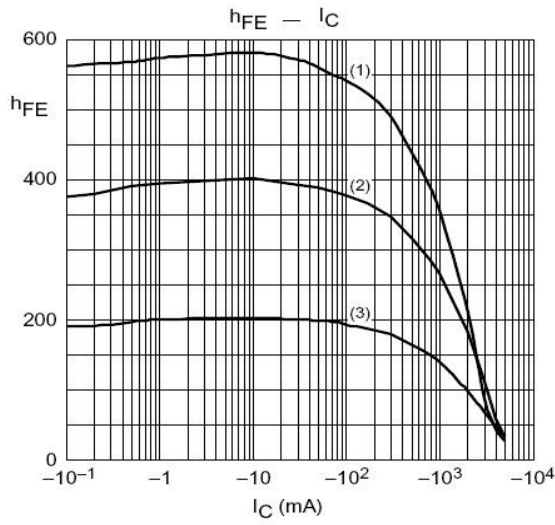
电性能参数 / Electrical Characteristics(Ta=25°C)

| 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 Cut-Off Current | I_{CBO} | $V_{CB}=-50V$ $I_E=0$ | | | -100 | nA |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-50V$ $I_E=0$ $T_j=150^\circ C$ | | | -50 | μA |
| Collector cut-off current | I_{CES} | $V_{CE}=-50V$ $V_{BE}=0$ | | | -100 | nA |
| Emitter Base Cut-Off Current | I_{EBO} | $V_{EB}=-5.0V$ $I_C=0$ | | | -100 | nA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=-2.0V$ $I_C=-0.1A$ | 200 | | | |
| | $h_{FE(2)}$ | $V_{CE}=-2.0V$ $I_C=-0.5A$ | 200 | | | |
| | $h_{FE(3)*}$ | $V_{CE}=-2.0V$ $I_C=-1.0A$ | 200 | | 450 | |
| | $h_{FE(4)*}$ | $V_{CE}=-2.0V$ $I_C=-2.0A$ | 130 | | | |
| | $h_{FE(5)*}$ | $V_{CE}=-2.0V$ $I_C=-3.0A$ | 80 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)(1)}$ | $I_C=-0.5A$ $I_B=-50mA$ | | | -90 | mV |
| | $V_{CE(sat)(2)}$ | $I_C=-2.0A$ $I_B=-100mA$ | | | -320 | mV |
| Equivalent on-resistance | $R_{CE(sat)*}$ | $I_C=-2.0A$ $I_B=-200mA$ | | 90 | 135 | m Ω |
| Base to Emitter Saturation Voltage | $V_{BE(sat)(1)}$ | $I_C=-2.0A$ $I_B=-100mA$ | | | -1.1 | V |
| | $V_{BE(sat)(2)*}$ | $I_C=-3.0A$ $I_B=-300mA$ | | | -1.2 | V |
| Base-emitter turn-on voltage | $V_{BE(ON)}$ | $V_{CE}=-2.0V$ $I_C=-1.0A$ | | | -1.1 | V |
| Transition Frequency | f_T | $V_{CE}=-5.0V$ $I_C=100mA$ $f=100MHz$ | 100 | | | MHz |
| Collector capacitance | C_C | $V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$ | | | 35 | pF |

*脉冲测试：脉宽 $\leq 300\mu s$, $\delta \leq 2.0\%$ 。

*pulse test: pulse width $\leq 300\mu s$, $\delta \leq 2.0\%$ 。

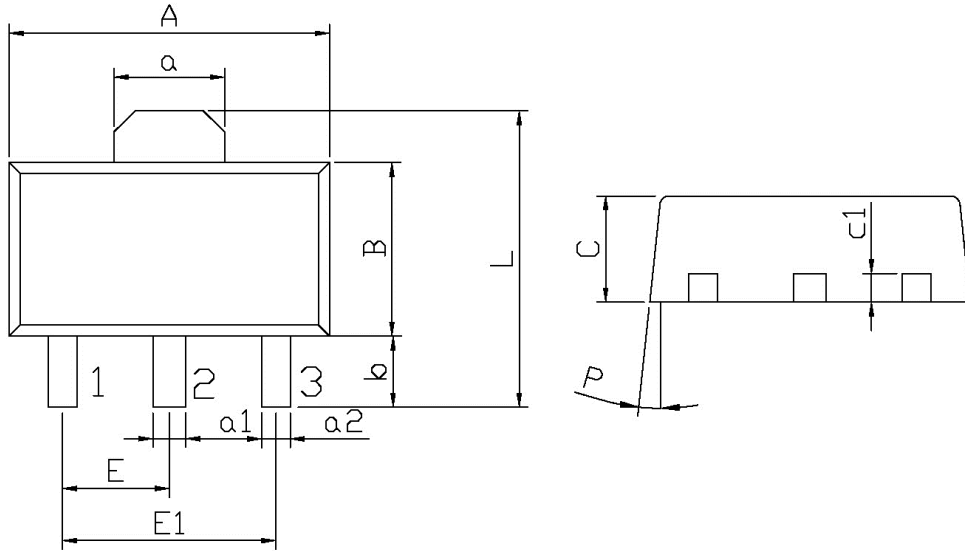
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

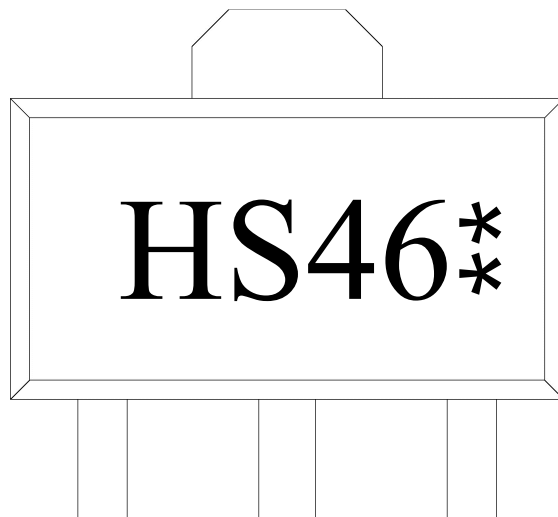
SOT-89

单位: mm



| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|-------|--------|---------------------------|------|
| | Min | Max | | Min | Max |
| A | 4.4 | 4.7 | a1 | 0.36 | 0.56 |
| B | 2.35 | 2.65 | a2 | 0.30 | 0.50 |
| L | 3.878 | 4.478 | C | 1.40 | 1.70 |
| a | 1.45 | 1.65 | c1 | 0.35 | 0.50 |
| E | 1.40 | 1.60 | P | 6° | |
| E1 | 2.80 | 3.20 | | | |
| b | 0.80 | 1.20 | | | |

印章说明 / Marking Instructions



说明：

H： 为公司代码

S46： 为型号代码

**： 为生产批号代码，随生产批号变化

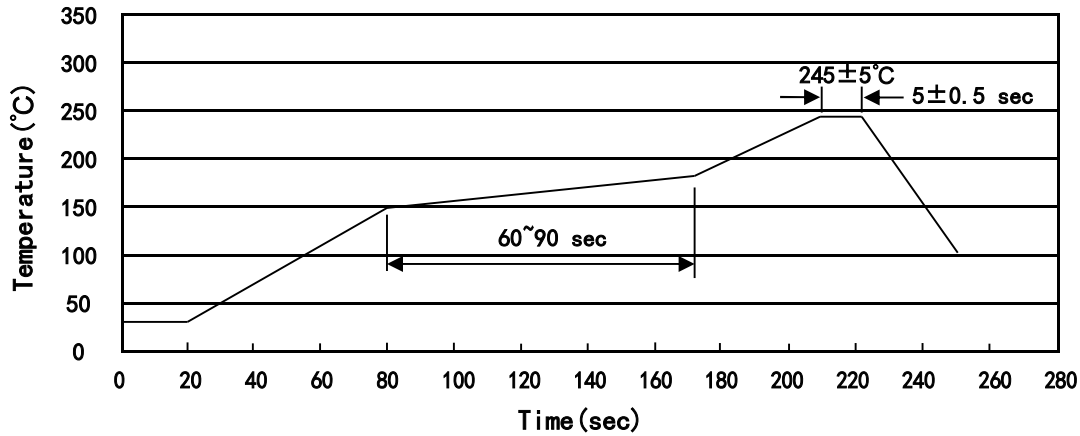
Note:

H: Company Code

S46: Product Type

** : Lot No. Code, code change with Lot No

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-89 | 1,000 | 7 | 7,000 | 6 | 42,000 | 7" ×12 | 180×120×180 | 390×385×205 |

使用说明 / Notices