

### 描述 / Descriptions

TO-92 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a TO-92 Plastic Package.

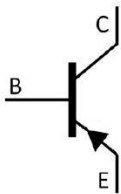
### 特征 / Features

$h_{FE}$  高。  
High  $h_{FE}$ .

### 用途 / Applications

用于普通放大。  
General amplifier application.

### 内部等效电路 / Equivalent Circuit



### 引脚排列 / Pinning



PIN 1 : Base      PIN 2 : Collector      PIN 3 : Emitter

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

$h_{FE}$ Classifications Symbol	Q	R	S
$h_{FE}$ Range	130~260	180~360	260~520

**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 <sub>CBO</sub>	2SA564	-25	V
		2SA564A	-45	
Collector to Emitter Voltage	V <sub>CEO</sub>	2SA564	-25	V
		2SA564A	-45	
Emitter to Base Voltage	V <sub>EBO</sub>	-7.0	V	
Collector Current - Continuous	I <sub>C</sub>	-100	mA	
Collector Current – Continuous(Pulse)	I <sub>CP</sub>	-200	mA	
Collector Power Dissipation	P <sub>C</sub>	400	mW	
Junction Temperature	T <sub>j</sub>	150	°C	
Storage Temperature Range	T <sub>stg</sub>	-55 ~ 150	°C	

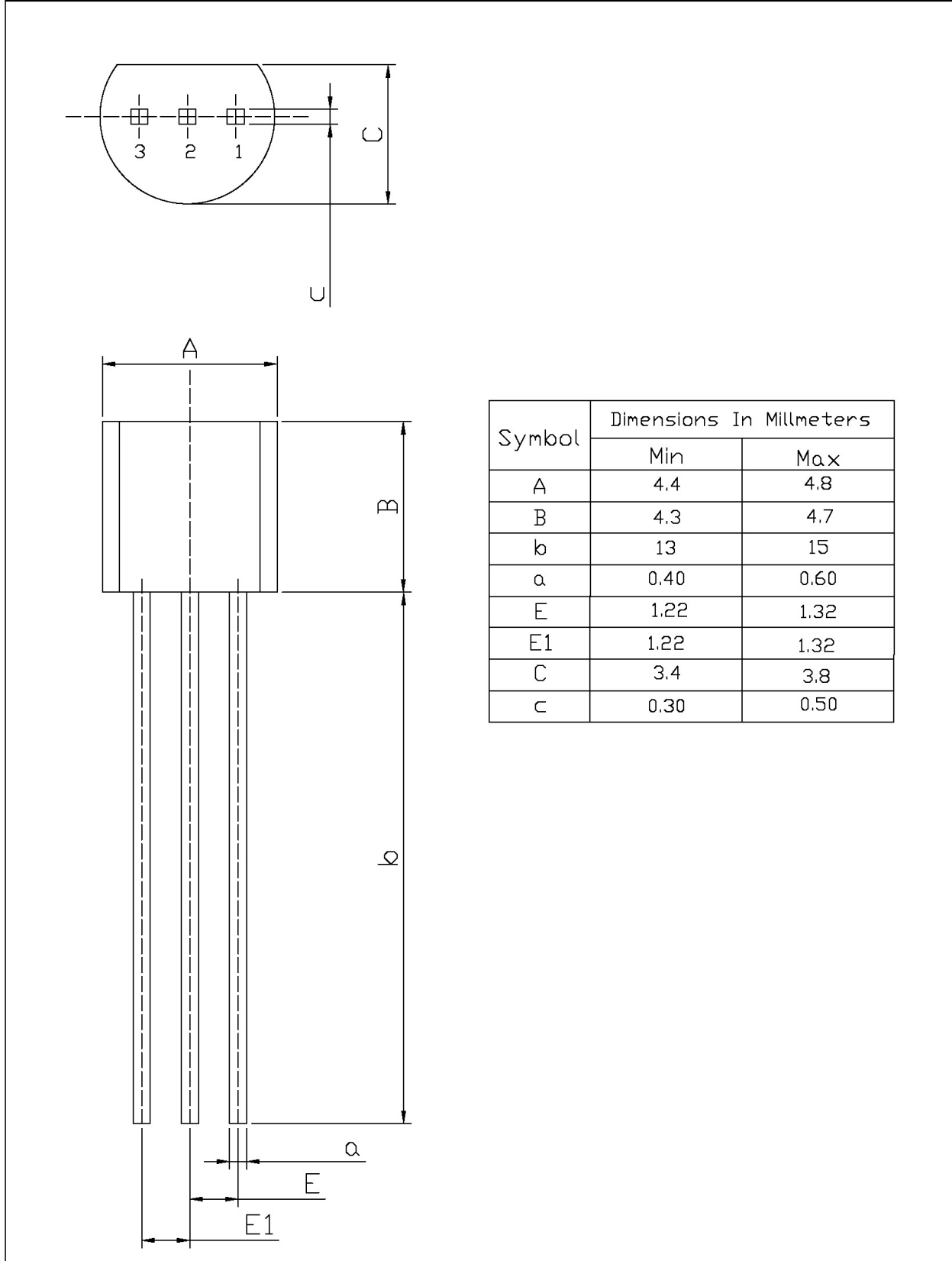
**电性能参数 / Electrical Characteristics(Ta=25°C)**

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 Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =-10V I <sub>E</sub> =0		-0.001	-1.0	μA
Collector Cut-Off Current	I <sub>CEO</sub>	V <sub>CE</sub> =-10V I <sub>B</sub> =0			-10	μA
Collector to Base Breakdown Voltage	V <sub>CBO</sub>	I <sub>C</sub> =-10uA I <sub>E</sub> =0	-25			V
			-45			
Collector to Emitter Breakdown Voltage	V <sub>CEO</sub>	I <sub>C</sub> =-10uA I <sub>E</sub> =0	-25			V
			-45			
Emitter to Base Breakdown Voltage	V <sub>EBO</sub>	I <sub>E</sub> =-10μA I <sub>C</sub> =0	-5.0			V
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =-10V I <sub>C</sub> =-2.0mA	130	250	520	
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-100mA I <sub>B</sub> =-10mA		-0.3		V
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V f=1.0MHz I <sub>E</sub> =0		3.5		pF

外形尺寸图 / Package Dimensions

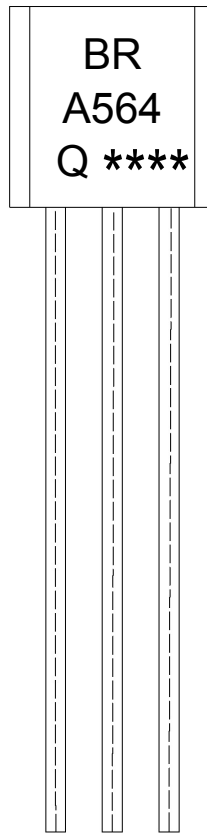
TO-92

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.4	4.8
B	4.3	4.7
b	13	15
a	0.40	0.60
E	1.22	1.32
E1	1.22	1.32
C	3.4	3.8
c	0.30	0.50

印章说明 / Marking Instructions



说明：

BR: 为公司代码

A564 : 为型号代码

Q: 为  $h_{FE}$  分档代码

\*\*\*\* : 为生产批号代码，随生产批号变化。

Note:

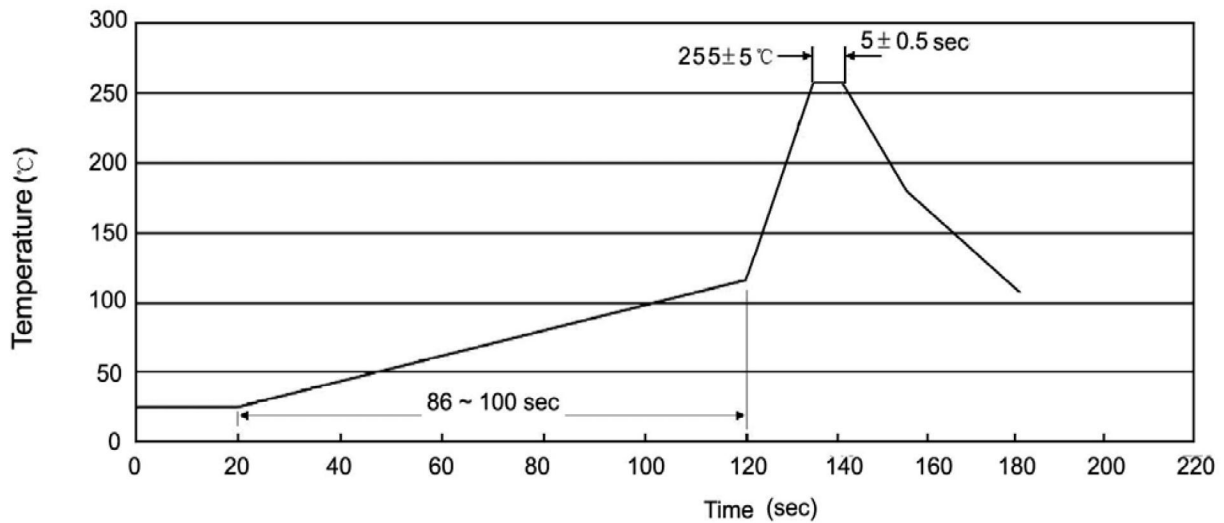
BR: Company Code.

A564: Product Type.

Q:  $h_{FE}$  Classifications Symbol

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

**波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)**



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 255±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.:255±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.**

散件包装 / BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

编带包装 / AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268

**使用说明 / Notices**