

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

耐压高。

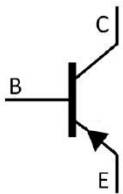
High voltage.

用途 / Applications

用于高电压中速开关电路中。

High voltage medium speed switching.

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

见印章说明。See Marking Instructions.

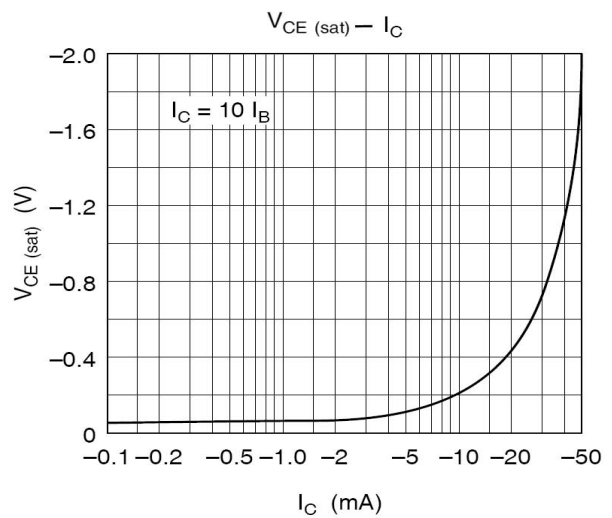
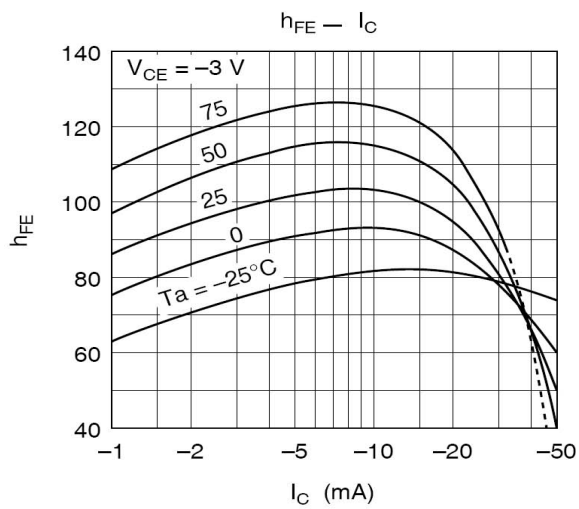
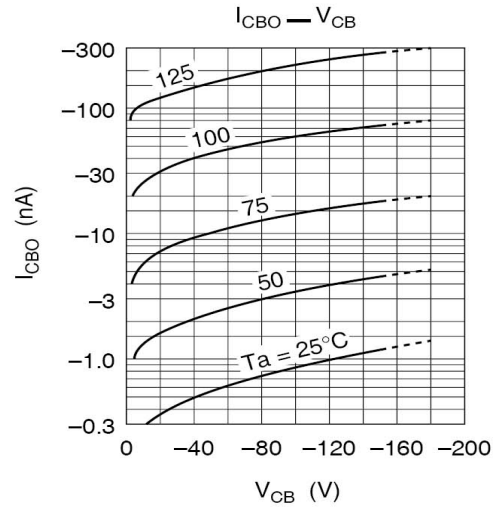
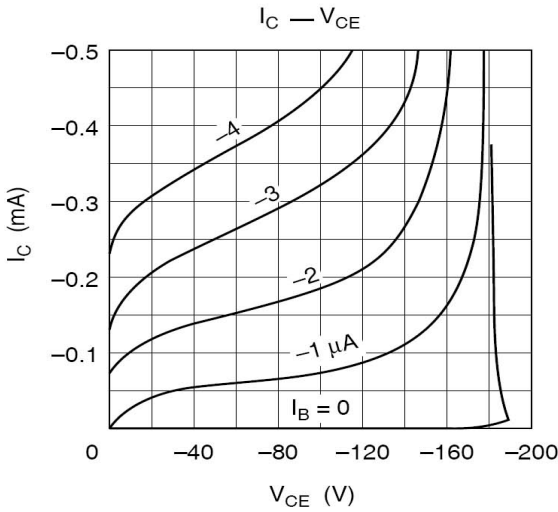
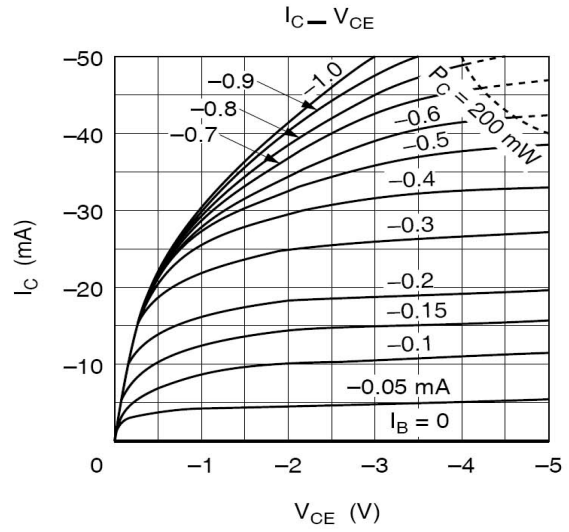
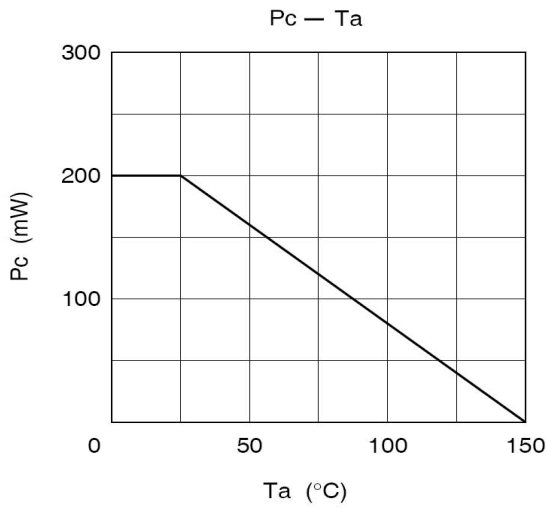
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit	
Collector to Base Voltage	V _{CBO}	2SA778	-150	V
		2SA778A	-180	
Collector to Emitter Voltage	V _{CEO}	2SA778	-150	V
		2SA778A	-180	
Emitter to Base Voltage	V _{EBO}	-5.0	V	
Collector Current - Continuous	I _C	-50	mA	
Collector Power Dissipation	P _C	200	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}	2SA778	I _C =-50μA I _E =0			V
		2SA778A				
Collector to Emitter Breakdown Voltage	V _{CBO}	2SA778	I _C =-50μA I _E =0			V
		2SA778A				
Collector Cut-Off Current	I _{CBO}	2SA778	V _{CB} =-100V I _E =0			μA
		2SA778A	V _{CB} =-150V I _E =0			
Emitter Cut-Off Current	I _{EBO}	V _{EB} =-5.0V I _C =0			-1.0	μA
DC Current Gain	h _{FE}	2SA778	V _{CE} =-3.0V I _C =-15mA	30	100	
		2SA778A		40	100	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =-15mA I _B =-1.0mA		-0.3	-1.0	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _C =-15mA I _B =-1.0mA		-0.77	-1.0	V
Transition Frequency	f _T	V _{CE} =-3.0V I _C =-15mA		50		MHz
Collector Output Capacitance	C _{ob}	V _{CB} =-10V I _E =0 f=1.0MHz			10	pF
Turn On Time	t _{on}	V _{CC} =-10.3V I _C =10 I _{B1} =-10 I _{B2} =-10mA		135		ns
Turn Off Time	t _{off}	V _{CC} =-10.3V I _C =10 I _{B1} =-10 I _{B2} =-10mA		1.7		μs
Storage Time	t _{stg}	V _{CC} =-10V I _C =-17mA I _{B1} =-1.0mA I _{B2} =12mA			1.0	μs

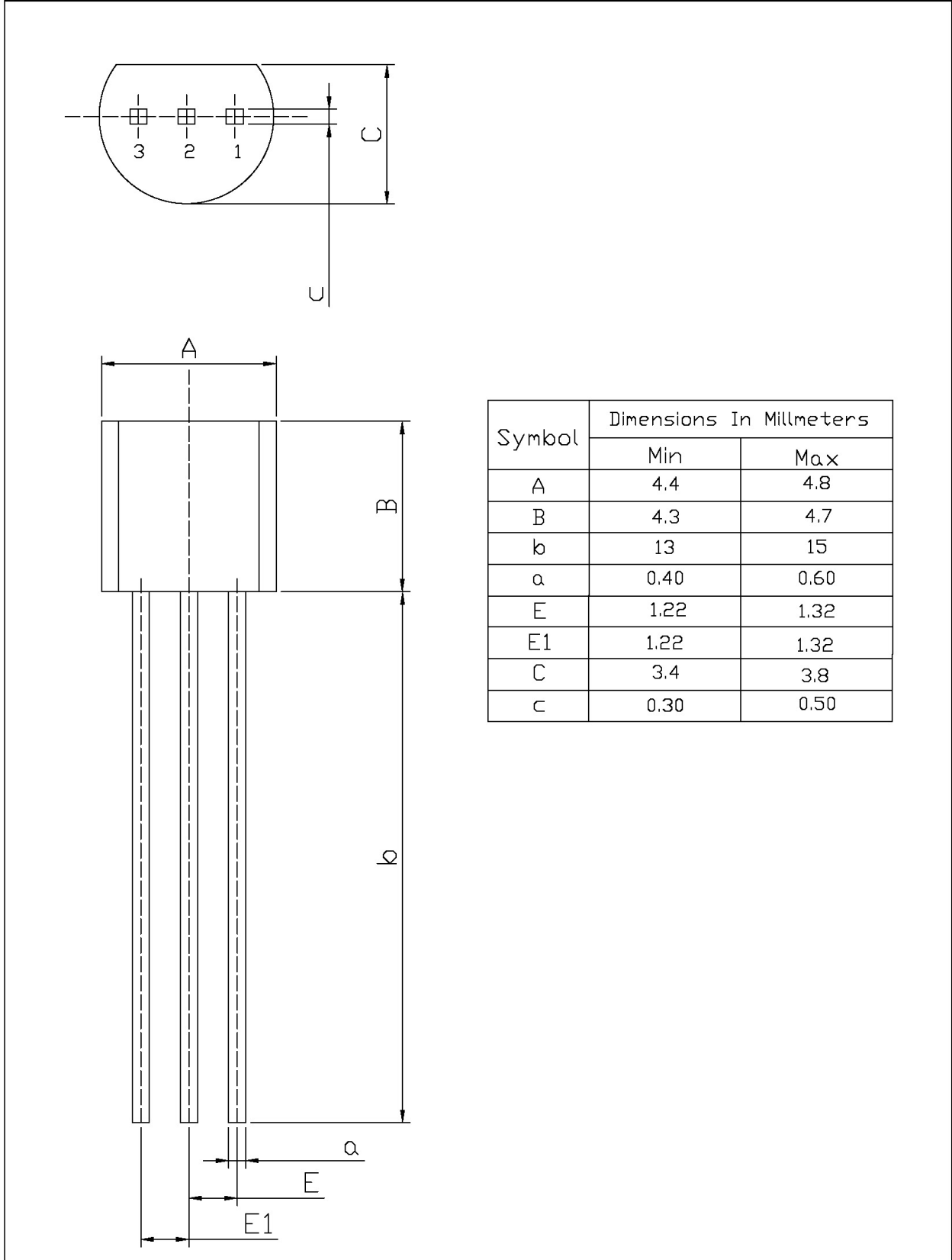
电参数曲线图 / Electrical Characteristic Curve



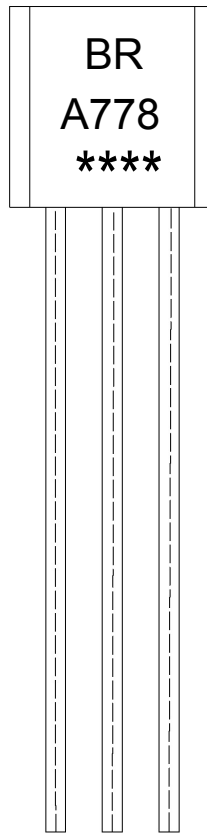
外形尺寸图 / Package Dimensions

T0-92

Unit: mm



印章说明 / Marking Instructions



说明：

BR: 为公司代码

A778 : 为型号代码

**** : 为生产批号代码，随生产批号变化。

Note:

BR: Company Code.

A778: Product Type.

****: 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