

BCP56

Rev.F Oct.-2023

描述 / Descriptions

SOT-223 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-223 Plastic Package.

特征 / Features

大电流、低电压，无卤产品。

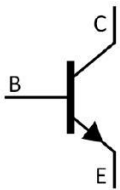
High current, Low voltage, HF product.

用途 / Applications

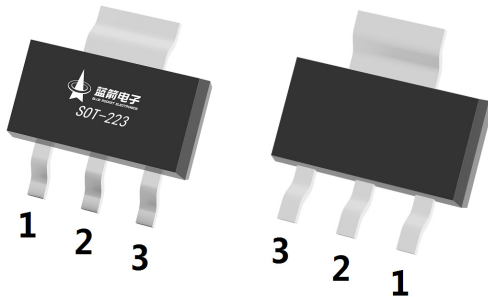
用于中功率开关电路。

Medium Power switching applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base

PIN 2 : Collector

PIN 3 : Emitter

放大及印章代码 / hFE Classifications & Marking

见印章说明。

See Marking Instructions.

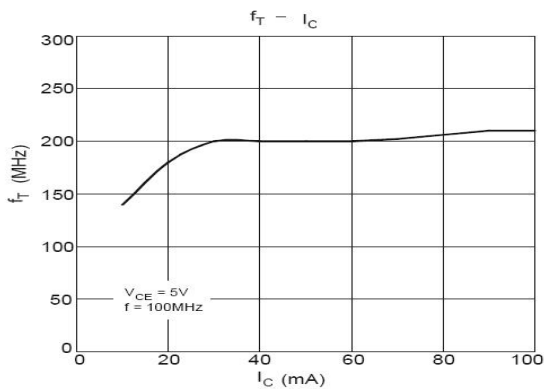
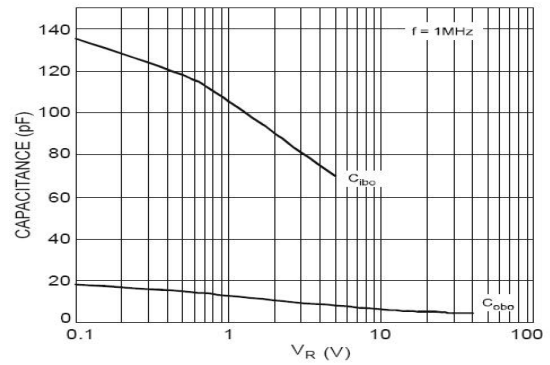
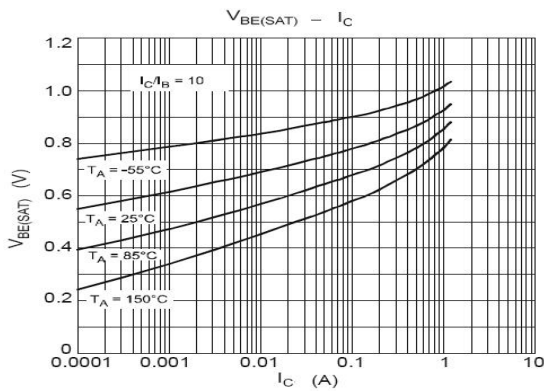
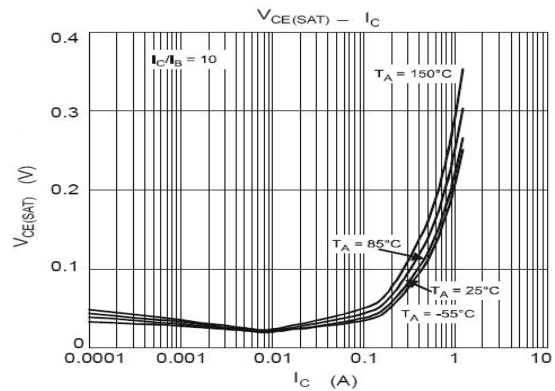
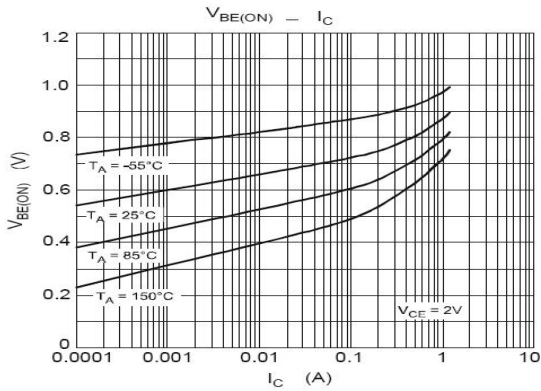
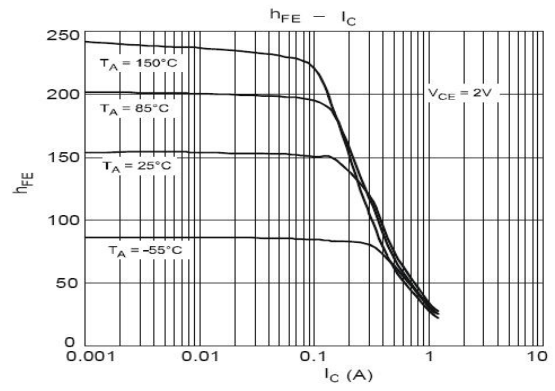
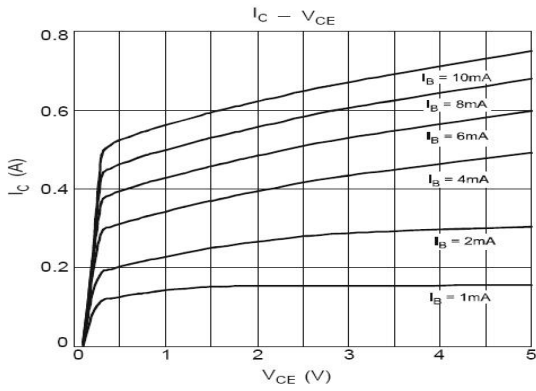
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V _{CBO}	100	V
Collector to Emitter Voltage	V _{CEO}	80	V
Emitter to Base Voltage	V _{EBO}	5.0	V
Collector Current - Continuous	I _C	1.0	A
Peak Pulse Collector Current	I _{CM}	1.5	A
Peak Pulse Base Current	I _{BM}	200	mA
Power Dissipation	P _D	1.2	W
Thermal Resistance, Junction to Ambient	R _{θJA}	105	K/W
Thermal Resistance, Junction to Leads	R _{θJS}	13	K/W
Junction Temperature	T _j	150	°C
Operating and Storage Temperature Range	T _{stg} T _{amb}	-65~150	°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 _{CBO}	V _{CB} =30V I _E =0			100	nA
		V _{CB} =30V I _E =0 T _j =125°C			10	μA
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 =5mA	25			
	h _{FE(2)}	V _{CE} =2.0V I _C =150mA	100		250	
	h _{FE(3)}	V _{CE} =2.0V I _C =500mA	25			
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =500mA I _B =50mA			0.5	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _C =500mA V _{CE} =2.0V			1.0	V
Transition Frequency	f _T	V _{CE} =-5V I _C =-10mA f=100MHz		130		MHz

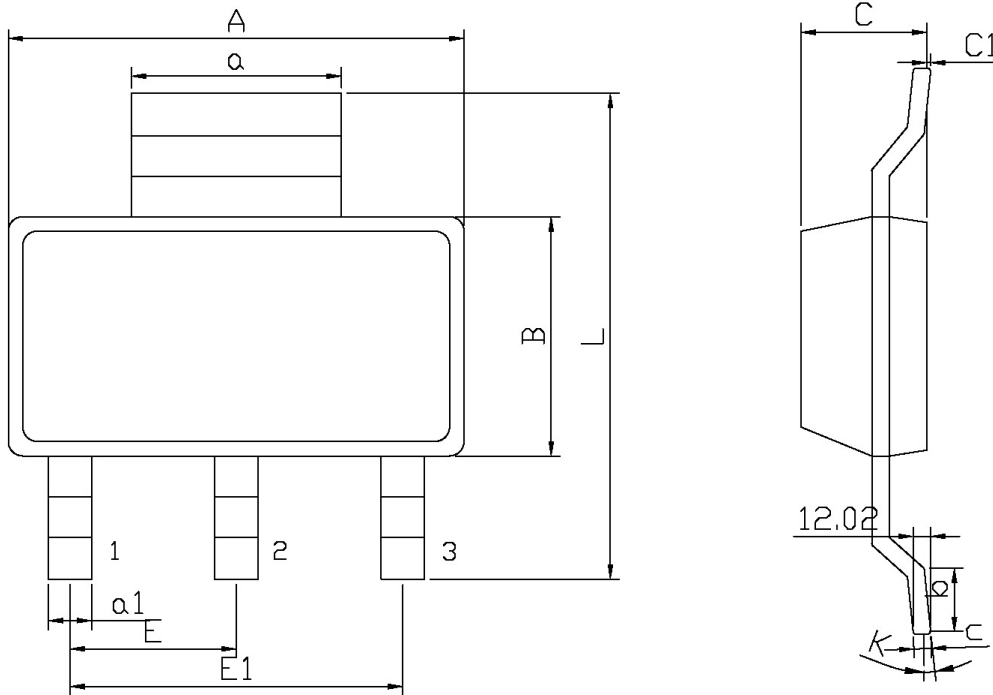
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

SOT-223

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	6.30	6.70	C	-	1.80
a	2.90	3.10	b	0.91	-
B	3.30	3.70	c	0.24	0.32
L	6.70	7.30	C1	0.02	0.10
a1	0.60	0.80	K	0°	10°
E1	4.10	5.10			
E	2.00	2.60			

印章说明 / Marking Instructions



说明：

BR： 为公司代码

BCP56： 为产品型号

****： 为生产批号代码，随生产批号变化

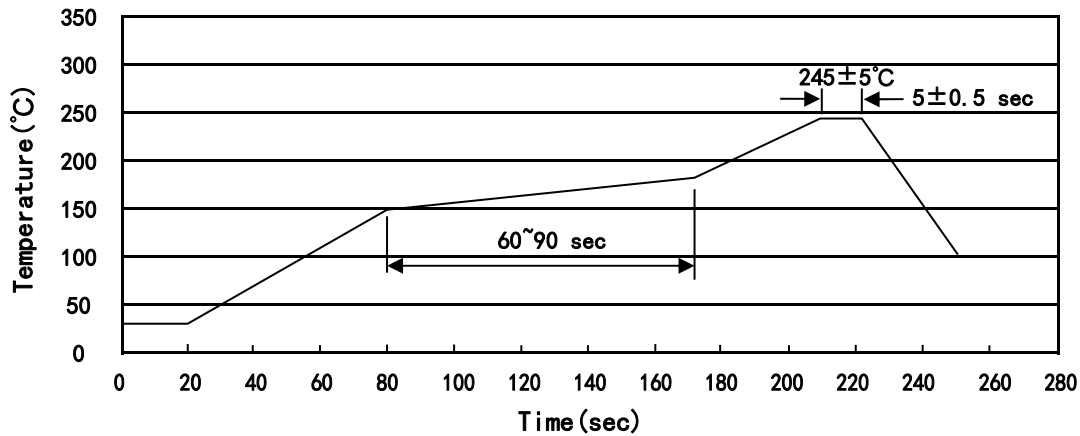
Note:

BR: Company Code

BCP56: 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-223	2,500	2	5,000	6	30,000	13" ×12	360×360×50	380×335×366

使用说明 / Notices