



# 2SC5200B

## 用途

- 应用于功率放大器

## 产品特性

- 高集电极电压:  $V_{CE0}=250V$  (min)
- 与 2SA1943B 互补
- 推荐用于 100W 高保真音响频率放大器输出电路
- 环保 (RoHS) 产品

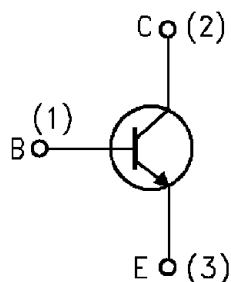
## APPLICATIONS

- Power Amplifier Applications

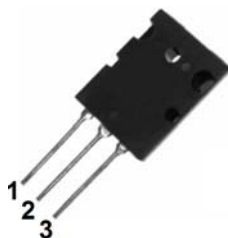
## FEATURES

- High collector voltage:  $V_{CE0}=250V$  (min)
- Complementary to 2SA1943 B
- Recommended for 100-W high-fidelity audio frequency amplifier output
- RoHS product

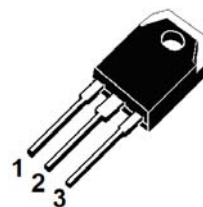
## 封装 Package



TO-3PLT



TO-3PB



- 1 基极 BASE    2 集电极 (热沉) COLLECTOR (HEAT SINK)  
3 发射极 EMITTER

## 订货信息 ORDER MESSAGE

订货型号 Order codes	印记 Marking	无卤素 Halogen Free	封装 Package	包装 Packaging	器件重量 Weight
2SC5200B-O-AB -N-B	2SC5200	否 NO	TO-3PB	条管 Tube	6.03g(typ)
2SC5200B -O-AL-N-B	2SC5200	否 NO	TO-3PLT	条管 Tube	9.53g(typ)
2SC5200B -O-AL-N-D	2SC5200	否 NO	TO-3PLT	泡沫盒 Foam Box	9.53g(typ)



**绝对最大额定值 ABSOLUTE RATINGS** (Tc=25℃ unless otherwise noted)

项 目 Parameter	符 号 Symbol	数 值 Value	单 位 Unit
集电极—基极直流电压 Collector- Base Voltage	V <sub>CB0</sub>	350	V
集电极—发射极直流电压 Collector- Emitter Voltage	V <sub>CEO</sub>	250	V
发射极—基极直流电压 Emitter-Base Voltage	V <sub>EBO</sub>	5	V
最大集电极电流 Collector Current	I <sub>C</sub>	16	A
最大基极电流 Base Current	I <sub>B</sub>	1.6	A
最大集电极耗散功率 TO-3PB Collector Dissipation(Tc=25℃)	P <sub>C</sub>	150	W
最大集电极耗散功率 TO-3PL Collector Dissipation(Tc=25℃)	P <sub>C</sub>	200	W
最高结温 Junction Temperature	T <sub>j</sub>	150	℃
贮存温度 Storage Temperature	T <sub>stg</sub>	-65~150	℃

**电特性 ELECTRICAL CHARACTERISTIC**(Tc=25℃ unless otherwise noted)

项 目 Parameter	测试条件 Tests conditions	最小值 Value(min)	典型值 Value(typ)	最大值 Value(max)	单位 Unit
I <sub>CB0</sub>	V <sub>CB</sub> =300V, I <sub>E</sub> =0	-	-	10.0	μA
I <sub>EBO</sub>	V <sub>EB</sub> =5.0V, I <sub>C</sub> =0	-	-	5.0	μA
V <sub>(BR)CEO</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =0	250	-	-	V
hFE	V <sub>CE</sub> =5.0V, I <sub>C</sub> =0.5A	75	-	135	-
	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0A	75	-	135	-
	V <sub>CE</sub> =5.0V, I <sub>C</sub> =3.0A	75	-	135	-
V <sub>CE(sat)</sub>	I <sub>C</sub> =5.0A, I <sub>B</sub> =0.5A	-	-	1.0	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =5.0A	-	-	1.2	V
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0A	10	-	-	MHz
C <sub>Ob</sub>	V <sub>CE</sub> =10V, I <sub>E</sub> =0, f=1MHz	-	-	400	pF

**热特性 THERMAL CHARACTERISTIC**

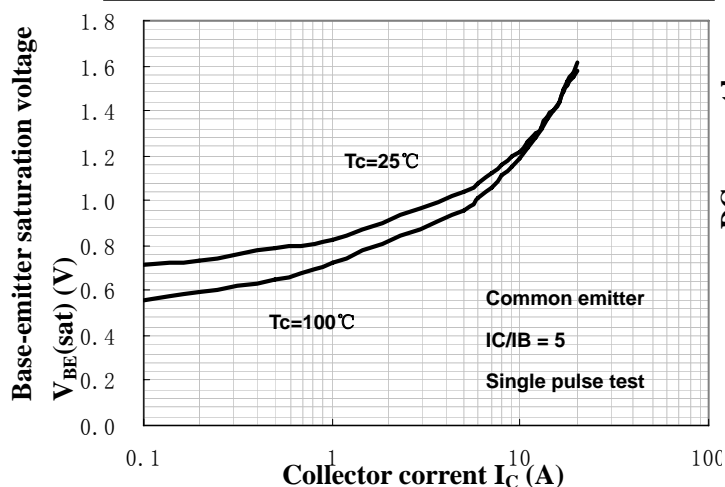
项 目 Parameter	符号 Symbo	最小值 min	最大值 max	单位 Unit
结到管壳的热阻 Thermal Resistance Junction Case TO-3PB	R <sub>th(j-c)</sub>	-	0.83	℃/W
结到管壳的热阻 Thermal Resistance Junction Case TO-3PLT	R <sub>th(j-c)</sub>	-	0.625	℃/W



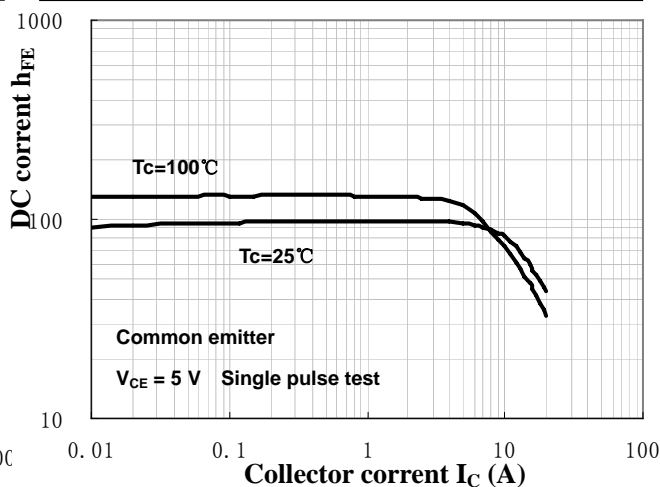


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

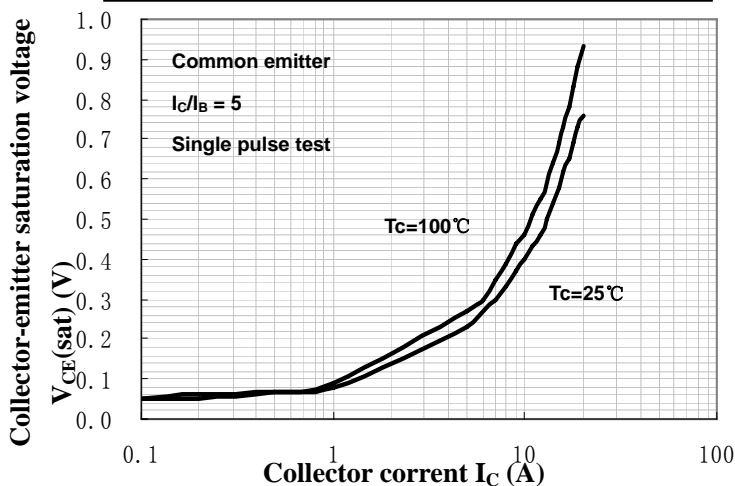
Base-Emitter Voltage



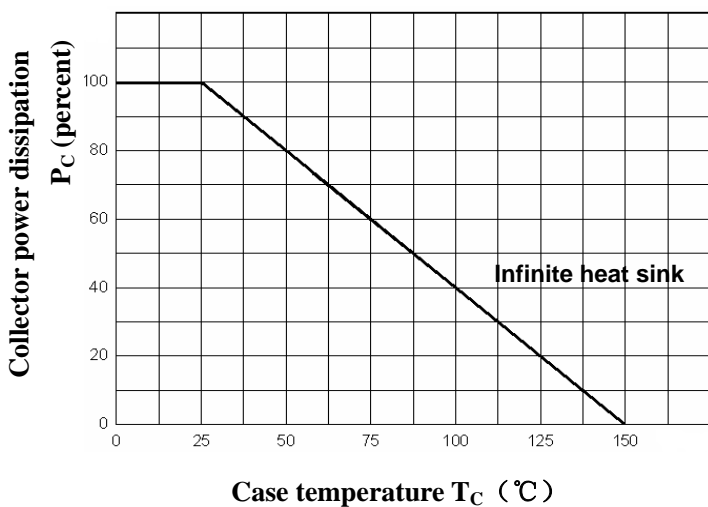
DC Current Gain



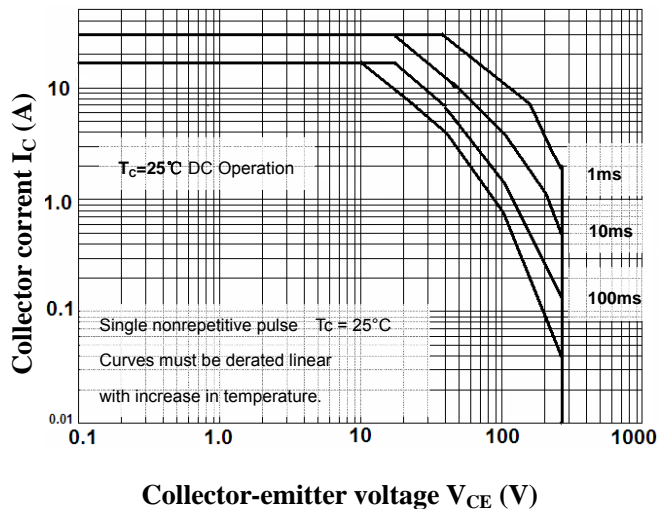
Saturation Voltage



Power Derating

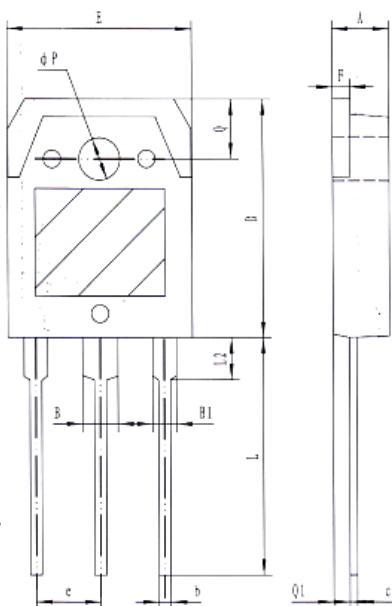


Safe Operating Area



**TO-3PB**

单位 Unit : mm

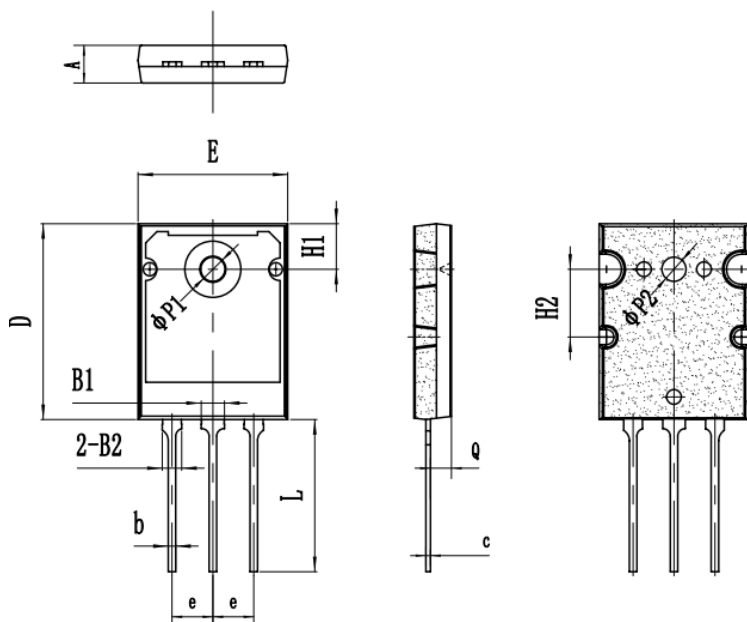


符号	尺寸 (mm)
A	4.60-5.00
B	2.90-3.20
B1	1.90-2.20
b	0.90-1.10
c	0.50-0.70
D	19.40-20.40
E	15.40-15.80
e	5.45(TYP)
F	1.40-1.60
L	19.50-20.50
L2	3.30-3.70
P	3.10-3.50
Q	4.90-5.10
Q1	1.30-1.50

## 外形尺寸 PACKAGE MECHANICAL DATA

**TO-3PLT**

单位 Unit : mm



符号	尺寸 (mm)
A	4.70-5.30
B1	2.80-3.20
B2	2.30-2.70
b	0.80-1.25
c	0.59-0.61
D	25.5-26.5
E	19.5-20.5
e	5.45(typ)
H1	6.00-6.10
H2	8.95-9.05
L	20.0-20.4
Q	2.75-2.85
P1	3.45-3.55
P2	3.20-3.30



**注意事项**

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3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
4. 本说明书如有版本变更不另外告知

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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**附录（Appendix）：修订记录（Revision History）**

日期 Date	旧版本 Last Rev.	新版本 New Rev.	修订内容 Description of Changes
2014-9-12		201409A	
2014-10-24	201409A	201410B	加入 TO-3PL 封装

