



# 2SA1943A

## 用途

- 应用于功率放大器

## 产品特性

- 高集电极电压:  $V_{CE0}=-230V$  (min)
- 与 2SC5200A 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

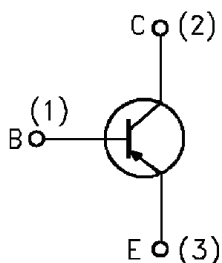
## APPLICATIONS

- Power Amplifier Applications

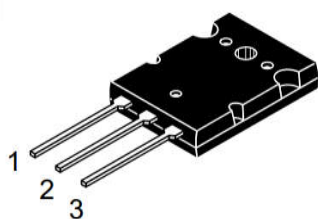
## FEATURES

- High collector voltage:  $V_{CE0}=-230V$  (min)
- Complementary to 2SC5200A
- Recommended for 100-W high-fidelity audio frequency amplifier output
- RoHS product

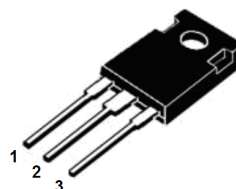
## 封装 Package



TO-3PL (T)



TO-247



- 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
2SA1943A-O-AL-N-D	TTA1943	否 NO	TO-3PL(T)	泡沫盒 Foam Box	9.53g(typ)
2SA1943A -O-AL-N-B	TTA1943	否 NO	TO-3PL(T)	条管 Tube	9.53g(typ)
2SA1943A -O-W -N-B	TTA1943	否 NO	TO-247	条管 Tube	6.03g(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>	-230	V
集电极—发射极直流电压 Collector- Emitter Voltage	V <sub>CEO</sub>	-230	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>	-15	A
最大基极电流 Base Current	I <sub>B</sub>	-1.5	A
最大集电极耗散功率 TO-247 Collector Dissipation(Tc=25℃)	P <sub>C</sub>	120	W
最大集电极耗散功率 TO-3PL Collector Dissipation(Tc=25℃)	P <sub>C</sub>	160	W
最高结温 Junction Temperature	T <sub>j</sub>	150	℃
贮存温度 Storage Temperature	T <sub>stg</sub>	-55~150	℃

**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> =-230V, I <sub>E</sub> =0	-	-	-5.0	Ma
I <sub>EBO</sub>	V <sub>EB</sub> =-5V, I <sub>C</sub> =0	-	-	-5.0	Ma
V <sub>(BR)CEO</sub>	I <sub>C</sub> =-50Ma, I <sub>B</sub> =0	-230	-	-	V
Hfe	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1.0A	80	-	160	-
	V <sub>CE</sub> =-5V, I <sub>C</sub> =-7.0A	35	-	-	-
V <sub>CE(sat)</sub>	I <sub>C</sub> =-8.0A, I <sub>B</sub> =-0.8A	-	-	-3.0	V
V <sub>BE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-7.0A	-	-	-1.5	V
Ft	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1.0A	30	-	-	MHz
C <sub>Ob</sub>	V <sub>CE</sub> =-10V, I <sub>E</sub> =0, f=1MHz	-	240	-	Pf

**热特性 THERMAL CHARACTERISTIC**

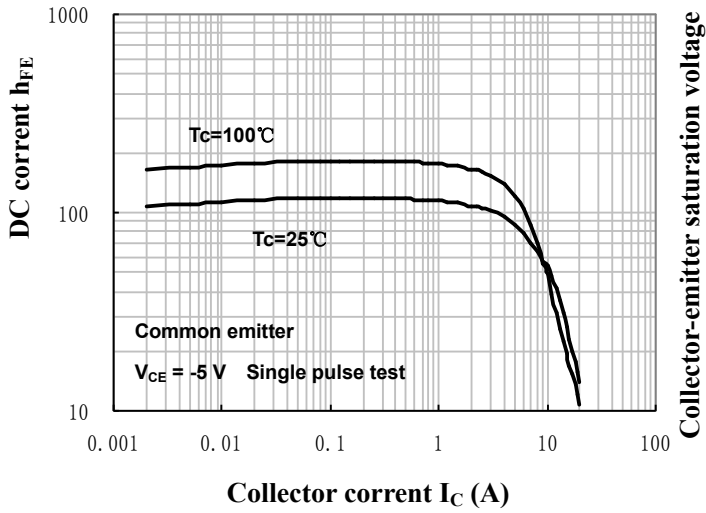
项 目 Parameter	符 号 Symbo	最小值 min	最大值 max	单 位 Unit
结到管壳的热阻 Thermal Resistance Junction Case TO-247	R <sub>th(j-c)</sub>	-	1.042	℃/W
结到管壳的热阻 Thermal Resistance Junction Case TO-3PL(T)	R <sub>th(j-c)</sub>	-	0.781	℃/W



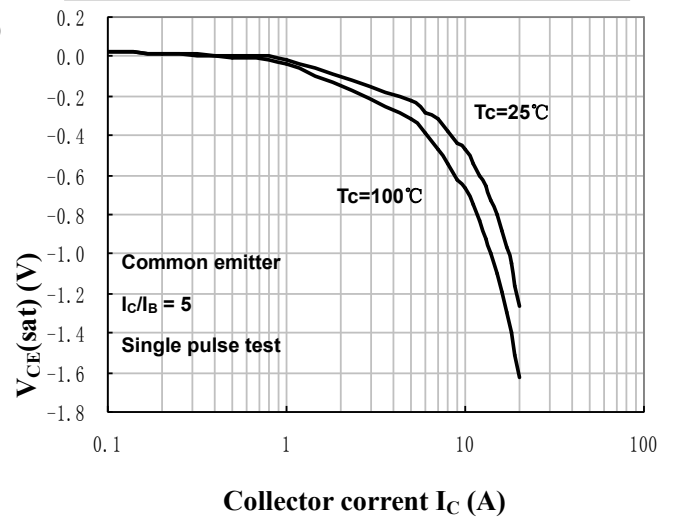


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

DC Current Gain



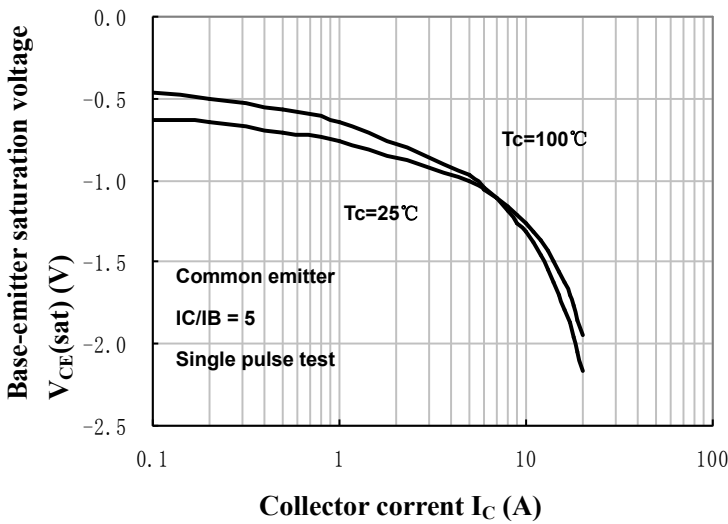
Saturation Voltage



Collector current  $I_C$  (A)

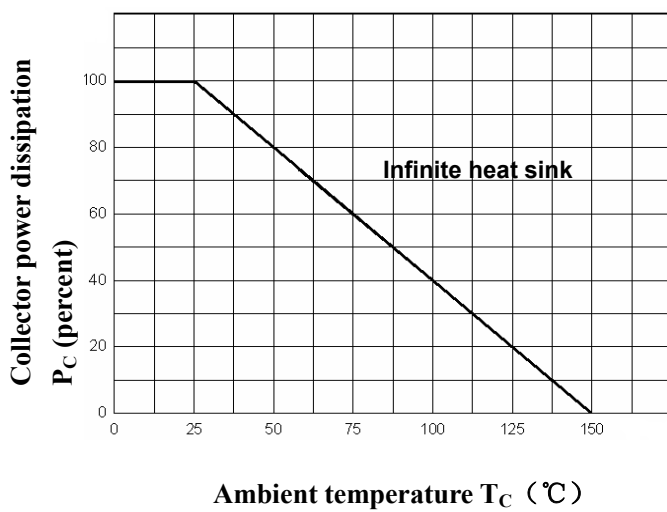
Collector current  $I_C$  (A)

Base-Emitter Voltage



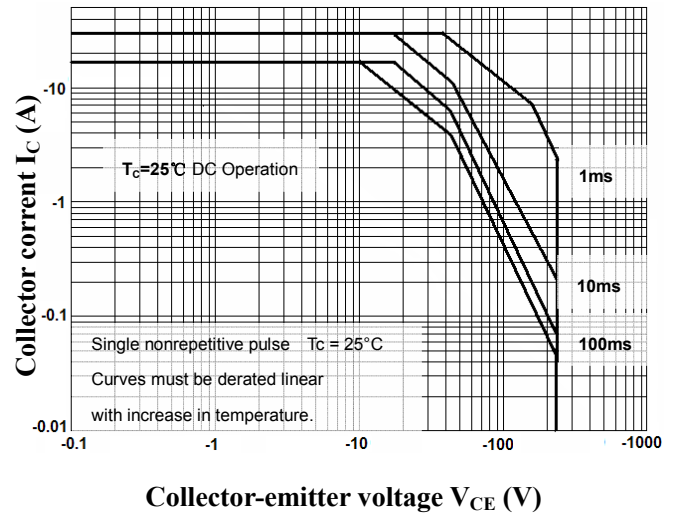
Collector current  $I_C$  (A)

PC-TC



Ambient temperature  $T_C$  ( $^\circ\text{C}$ )

SOA

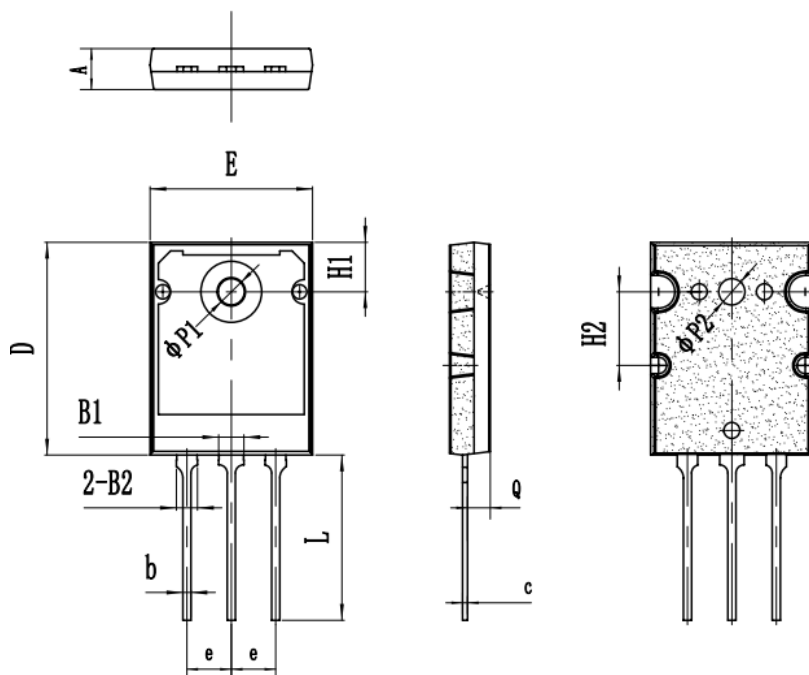


Collector-emitter voltage  $V_{CE}$  (V)



**TO-3PLT**

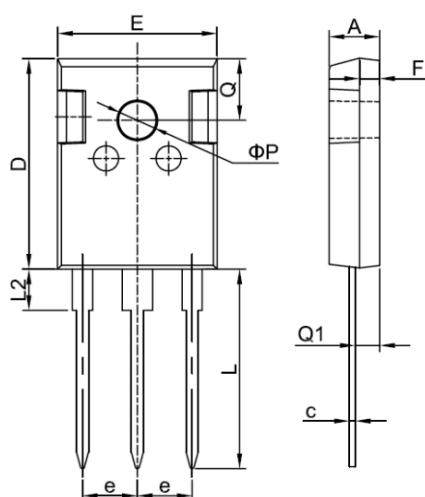
单位 Unit : mm



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

**TO-247**

单位 Unit : mm



符号	尺寸 (mm)
A	4.90-5.10
B	2.95-3.35
B1	1.95-2.35
b	1.15-1.35
c	0.50-0.70
D	20.9-21.1
E	15.7-15.9
e	5.34-5.54
F	1.90-2.10
L	19.4-20.4
L2	4.03-4.23
P	3.50-3.70
Q	6.00-6.40
Q1	2.30-2.50



**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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2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
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.

**联系方式****吉林华微电子股份有限公司**

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：[www.hwdz.com.cn](http://www.hwdz.com.cn)**市场营销部**

地址：吉林省吉林市深圳街 99 号

邮编：132013

电话：86-432-64675588

64675688

64678411

传真：86-432-4671533

**CONTACT****JILIN SINO-MICROELECTRONICS CO., LTD.**

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64678411

Fax: 86-432-64665812

Web Site: [www.hwdz.com.cn](http://www.hwdz.com.cn)**MARKET DEPARTMENT**

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64675588

64675688

64678411

Fax: 86-432-64671533

**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
2016-2-5	201410A	201602B	订货信息 外形

