

Silicon PNP Power Transistors

2SA913 2SA913A

DESCRIPTION

- With TO-220 package
- Complement to type 2SC1913/1913A
- Large collector power dissipation
- High V_{CEO}

APPLICATIONS

- Audio frequency high power driver

PINNING

| PIN | DESCRIPTION |
|-----|--------------------------------------|
| 1 | Emitter |
| 2 | Collector;connected to mounting base |
| 3 | Base |

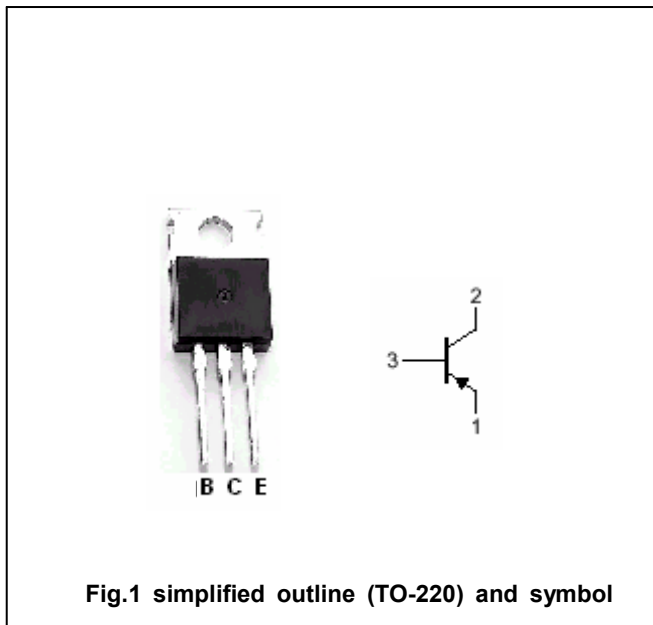


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|------------------|---------|------|
| V_{CBO} | Collector-base voltage | 2SA913 | -150 | V |
| | | 2SA913A | -180 | |
| V_{CEO} | Collector-emitter voltage | 2SA913 | -150 | V |
| | | 2SA913A | -180 | |
| V_{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I_C | Collector current | | -1 | A |
| I_{CM} | Collector current-peak | | -1.5 | A |
| P_C | Collector power dissipation | $T_C=25^\circ C$ | 15 | W |
| T_j | Junction temperature | | 150 | °C |
| T_{stg} | Storage temperature | | -55~150 | °C |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---------|---|------|------|------|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | 2SA913 | I _C =-0.1mA, I _B =0 | -150 | | | V |
| | | 2SA913A | | -180 | | | |
| V _{(BR)EBO} | Emitter-base breakdown voltage | | I _E =-10μA, I _C =0 | -5 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | 2SA913 | I _C =-0.5A; I _B =-50mA | | | -1.0 | V |
| | | 2SA913A | I _C =-0.3A; I _B =-30mA | | | -1.5 | |
| V _{BEsat} | Base-emitter saturation voltage | 2SA913 | I _C =-0.5A; I _B =-50mA | | | -1.5 | V |
| | | 2SA913A | I _C =-0.3A; I _B =-30mA | | | | |
| I _{CBO} | Collector cut-off current | | V _{CB} =-120V; I _E =0 | | | -1 | μA |
| I _{EBO} | Emitter cut-off current | | V _{EB} =-4V; I _C =0 | | | -1 | μA |
| h _{FE-1} | DC current gain | | I _C =-150mA; V _{CE} =-10V | 65 | | 330 | |
| h _{FE-2} | DC current gain | | I _C =-500mA; V _{CE} =-5V | 50 | | | |
| C _{OB} | Output capacitance | | I _E =0; V _{CB} =-100V; f=1MHz | | | 15 | pF |
| f _T | Transition frequency | | I _C =50mA; V _{CE} =-10V | | 120 | | MHz |

◆ h_{FE-1} Classifications

| P | Q | R | S |
|--------|--------|---------|---------|
| 65-110 | 90-155 | 130-220 | 185-330 |

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PACKAGE OUTLINE



Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)