

Silicon NPN Power Transistors

2SC2923

**DESCRIPTION**

- With TO-220F package
- High  $V_{CEO}$
- Low  $C_{OB}$

**APPLICATIONS**

- For color TV chroma output applications

**PINNING**

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Base        |
| 2   | Collector   |
| 3   | Emitter     |

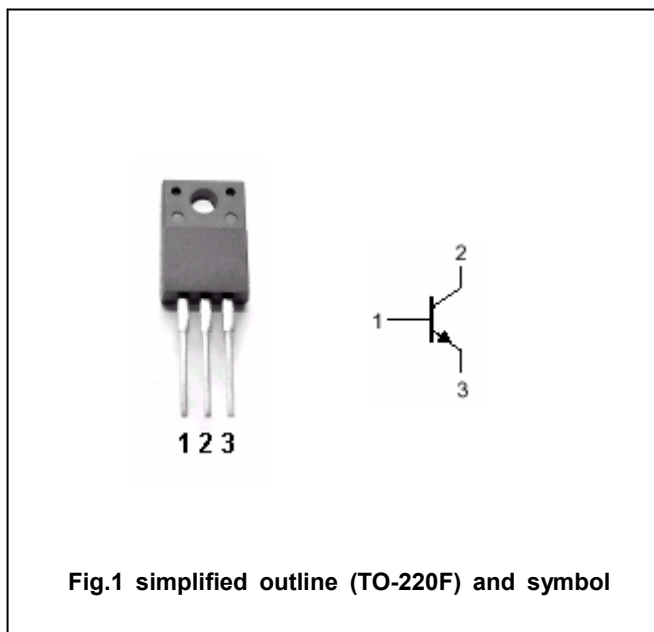


Fig.1 simplified outline (TO-220F) and symbol

**Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )**

| SYMBOL    | PARAMETER                   | CONDITIONS             | VALUE   | UNIT             |
|-----------|-----------------------------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter           | 300     | V                |
| $V_{CEO}$ | Collector-emitter voltage   | Open base              | 300     | V                |
| $V_{EBO}$ | Emitter-base voltage        | Open collector         | 7       | V                |
| $I_C$     | Collector current           |                        | 0.1     | A                |
| $I_{CM}$  | Collector current-peak      |                        | 0.2     | A                |
| $P_C$     | Collector power dissipation | $T_a=25^\circ\text{C}$ | 1.4     | W                |
|           |                             | $T_C=25^\circ\text{C}$ | 15      |                  |
| $T_j$     | Junction temperature        |                        | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |                        | -55~150 | $^\circ\text{C}$ |

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## CHARACTERISTICS

T<sub>j</sub>=25 °C unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                      | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =30mA I <sub>B</sub> =3mA        |     |      | 1.5 | V    |
| V <sub>BE</sub>      | Base-emitter on voltage              | I <sub>C</sub> =30mA ; V <sub>CE</sub> =10V     |     |      | 1.2 | V    |
| V <sub>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =10μA; I <sub>E</sub> =0         | 300 |      |     | V    |
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =100μA; I <sub>B</sub> =0        | 300 |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =10μA; I <sub>C</sub> =0         | 7   |      |     | V    |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =5mA ; V <sub>CE</sub> =50V      | 50  |      | 250 |      |
| C <sub>OB</sub>      | Output capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> =30V; f=1MHz |     | 2.4  |     | pF   |
| f <sub>T</sub>       | Transition frequency                 | I <sub>E</sub> =20mA ; V <sub>CB</sub> =30V     | 70  |      |     | MHz  |

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PACKAGE OUTLINE

