

Silicon NPN Power Transistors

2SD525

DESCRIPTION

- With TO-220C package
- Complement to type 2SB595
- High breakdown voltage : $V_{CEO}=100V$
- Low collector saturation voltage
: $V_{CE(sat)}=2.0V(Max)$

APPLICATIONS

- Power amplifier applications
- Recommend for 30W high fidelity audio frequency amplifier output stage

PINNING

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

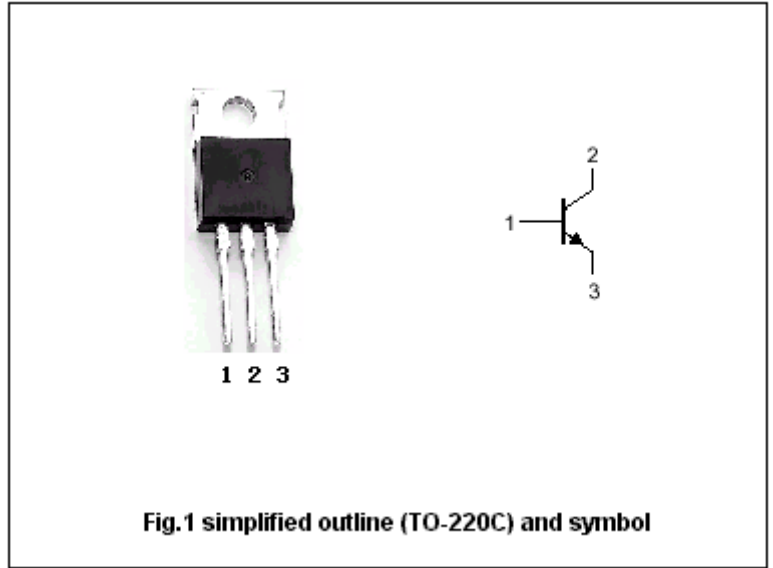


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings($T_c=25^\circ C$)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| V_{CBO} | Collector-base voltage | Open emitter | 100 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 100 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I_C | Collector current | | 5 | A |
| I_E | Emitter current | | 5 | A |
| I_B | Base current | | 0.5 | A |
| P_C | Collector power dissipation | $T_c=25$ | 40 | W |
| T_j | Junction temperature | | 150 | |
| T_{stg} | Storage temperature | | -55-150 | |

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CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|--------------------|--------------------------------------|---|-----|------|-----|------|
| V _{CEO} | Collector-emitter breakdown voltage | I _C =50mA; I _B =0 | 100 | | | V |
| V _{EBO} | Emitter-base breakdown voltage | I _E =10mA; I _C =0 | 5 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =4A; I _B =0.4 A | | | 2.0 | V |
| V _{BE} | Emitter-base voltage | I _C =1A; V _{CE} =5V | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =100V I _E =0 | | | 100 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 1 | mA |
| h _{FE-1} | DC current gain | I _C =1A; V _{CE} =5V | 40 | | 240 | |
| h _{FE-2} | DC current gain | I _C =4A; V _{CE} =5V | 20 | | | |
| f _T | Transition frequency | I _C =1A; V _{CE} =5V | | 12 | | MHz |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =10V; f=1MHz | | 100 | | pF |

◆ h_{FE-1} classifications

| R | O | Y |
|-------|--------|---------|
| 40-80 | 70-140 | 120-240 |

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PACKAGE OUTLINE

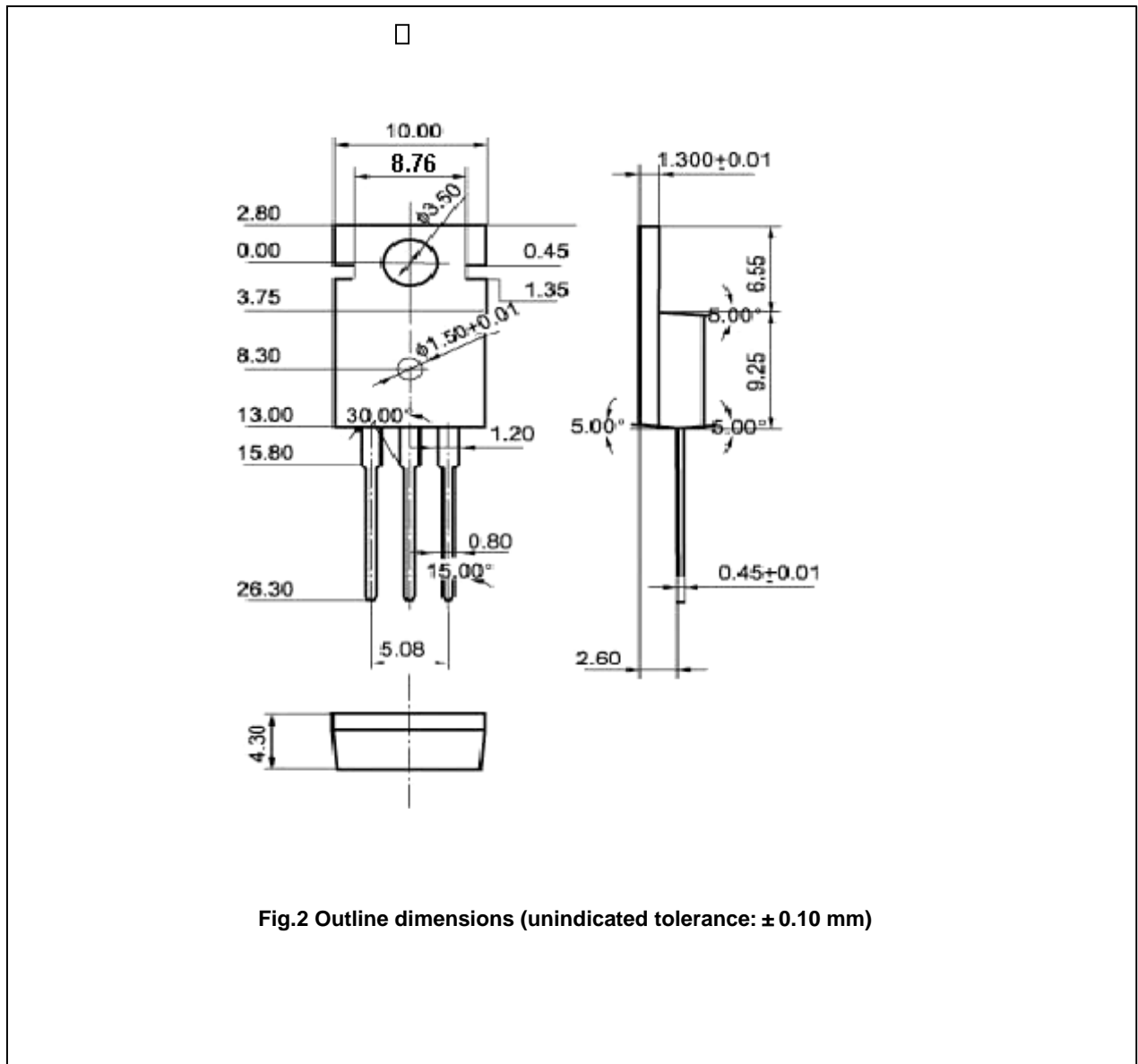


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)