

Silicon NPN Power Transistors

2SC1226 2SC1226A

DESCRIPTION

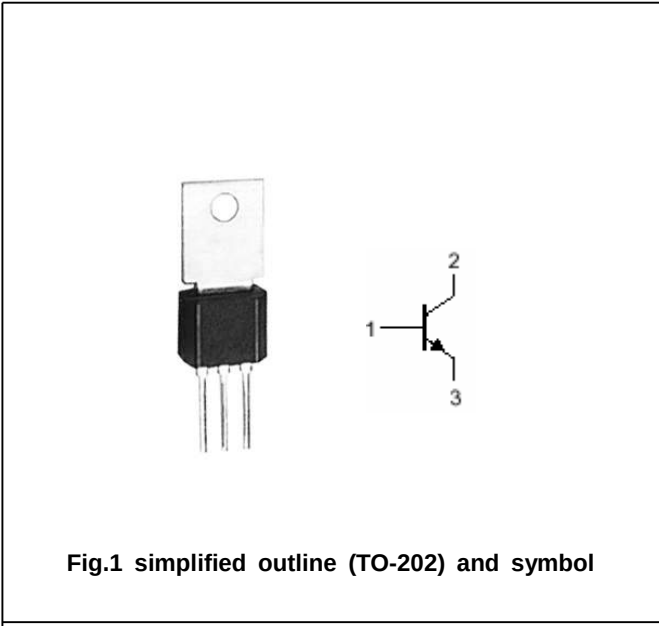
- With TO-202 package
- Complement to type 2SA699/699A

APPLICATIONS

- For medium power amplifier applications

PINNING(see Fig.2)

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



Absolute maximum ratings (Ta=25?)

| SYMBOL           | PARAMETER                   |          | CONDITIONS          | VALUE   | UNIT |
|------------------|-----------------------------|----------|---------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | 2SC1226  | Open emitter        | 40      | V    |
|                  |                             | 2SC1226A |                     | 50      |      |
| V <sub>CEO</sub> | Collector-emitter voltage   | 2SC1226  | Open base           | 32      | V    |
|                  |                             | 2SC1226A |                     | 40      |      |
| V <sub>EBO</sub> | Emitter-base voltage        |          | Open collector      | 5       | V    |
| I <sub>C</sub>   | Collector current           |          |                     | 2       | A    |
| I <sub>CM</sub>  | Collector current-peak      |          |                     | 3       | A    |
| I <sub>B</sub>   | Base current                |          |                     | 0.6     | A    |
| P <sub>C</sub>   | Collector power dissipation |          | T <sub>C</sub> =25? | 10      | W    |
| T <sub>j</sub>   | Junction temperature        |          |                     | 150     | ?    |
| T <sub>stg</sub> | Storage temperature         |          |                     | -55~150 | ?    |

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## CHARACTERISTICS

Tj=25? unless otherwise specified

| SYMBOL        | PARAMETER                            |          | CONDITIONS                 | MIN | TYP. | MAX | UNIT    |
|---------------|--------------------------------------|----------|----------------------------|-----|------|-----|---------|
| $V_{CEsat}$   | Collector-emitter saturation voltage |          | $I_C=2A ; I_B=0.2 A$       |     | 0.4  | 1.0 | V       |
| $V_{BEsat}$   | Base-emitter saturation voltage      |          | $I_C=2A ; I_B=0.2 A$       |     |      | 1.5 | V       |
| $V_{(BR)CBO}$ | Collector-base breakdown voltage     | 2SC1226  | $I_C=1mA; I_E=0$           | 40  |      |     | V       |
|               |                                      | 2SC1226A |                            | 50  |      |     |         |
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage  | 2SC1226  | $I_C=10mA; I_B=0$          | 32  |      |     | V       |
|               |                                      | 2SC1226A |                            | 40  |      |     |         |
| $I_{CBO}$     | Collector cut-off current            |          | $V_{CB}=20V; I_E=0$        |     |      | 1   | $\mu A$ |
| $I_{CEO}$     | Collector cut-off current            |          | $V_{CE}=12V; I_B=0$        |     |      | 100 | $\mu A$ |
| $I_{EBO}$     | Emitter cut-off current              |          | $V_{EB}=5V; I_C=0$         |     |      | 100 | $\mu A$ |
| $h_{FE}$      | DC current gain                      |          | $I_C=1A ; V_{CE}=5V$       | 50  |      | 220 |         |
| $C_{OB}$      | Output capacitance                   |          | $I_E=0; V_{CB}=5V; f=1MHz$ |     | 50   |     | pF      |
| $f_T$         | Transition frequency                 |          | $I_E=0.5A ; V_{CB}=5V$     |     | 150  |     | MHz     |

U  $h_{FE}$  classifications

| P      | Q      | R       |
|--------|--------|---------|
| 50-100 | 80-160 | 100-220 |

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PACKAGE OUTLINE

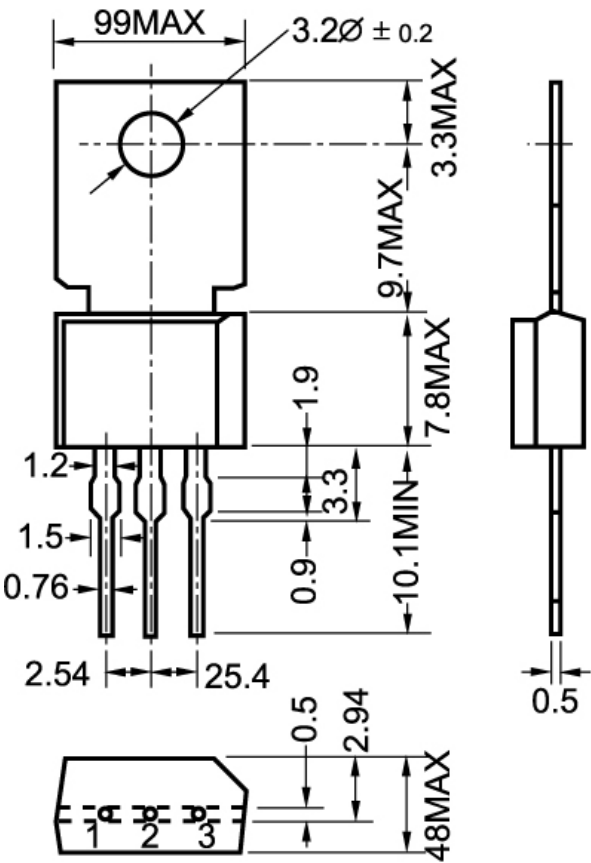


Fig.2 outline dimensions

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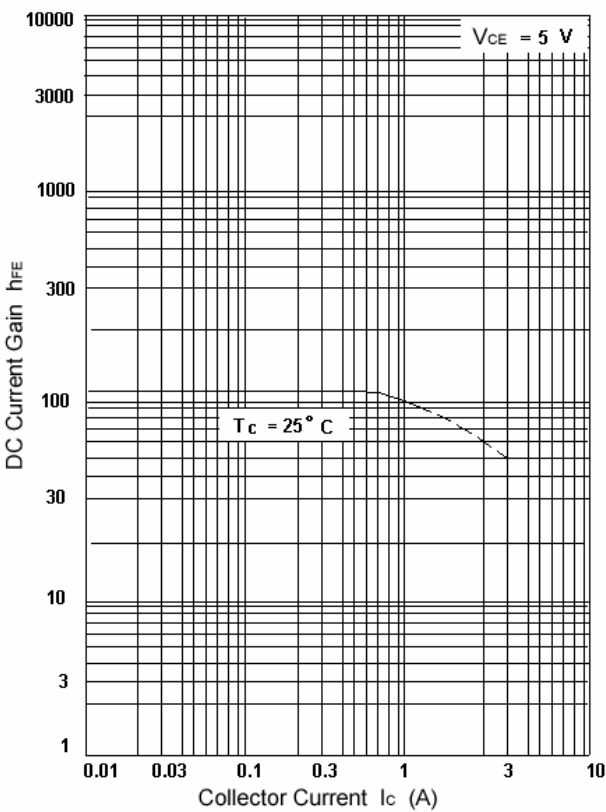


Fig.3 DC current Gain

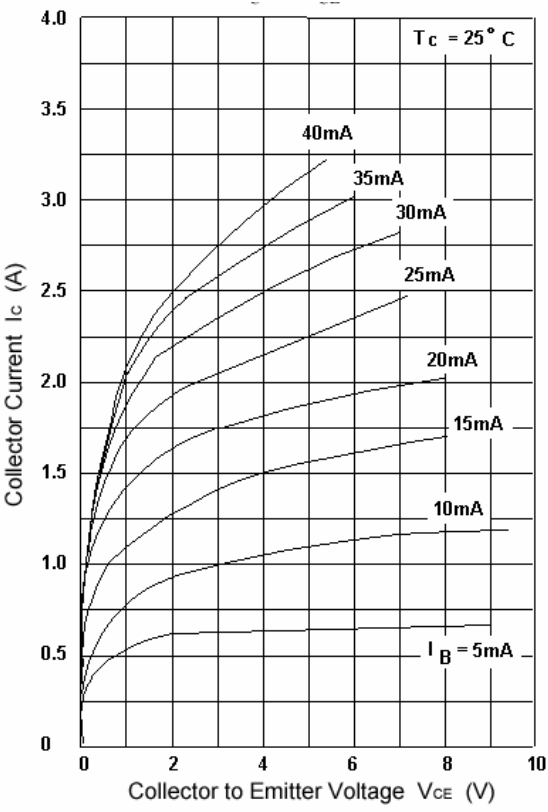


Fig.4 Static Characteristic

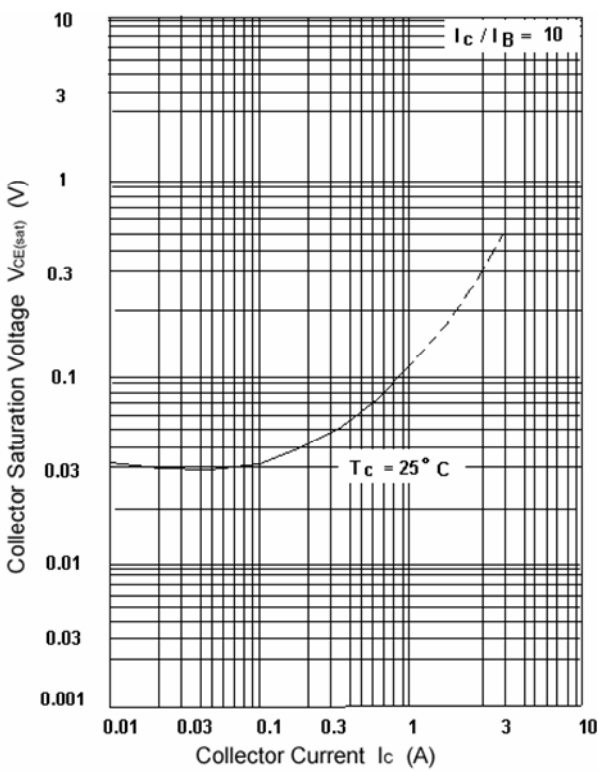


Fig.5 Collector-Emitter Saturation Voltage

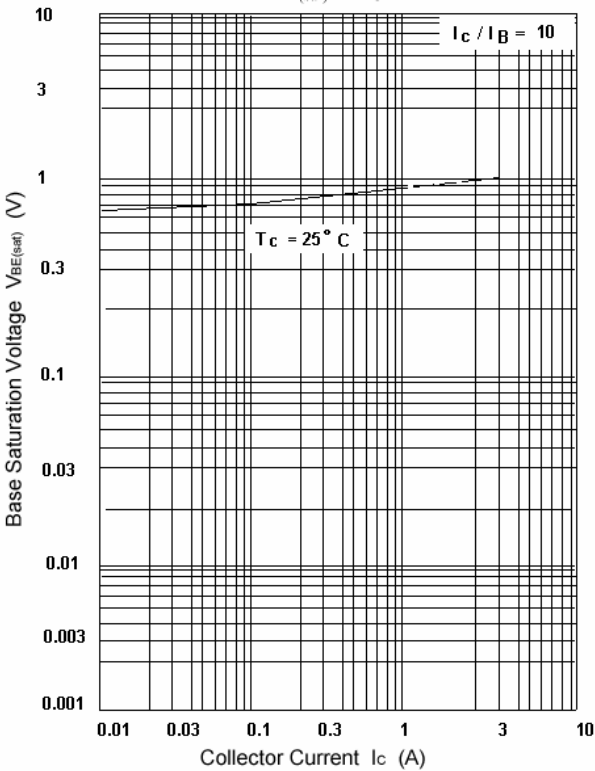


Fig.6 Base-Emitter Saturation Voltage

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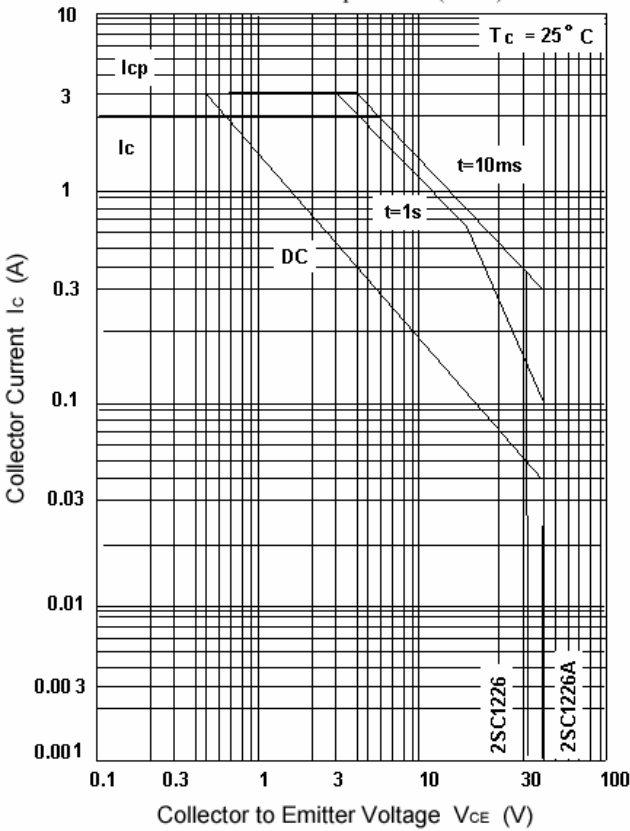


Fig.7 Safe Operating Area