

## Silicon NPN Power Transistors

## BU326 BU326A

## DESCRIPTION

- With TO-3 package
- High voltage;high speed
- Low collector saturation voltage.

## APPLICATIONS

- Intended for operating in CTV receiver's chopper supplies.

## PINNING(see fig.2)

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

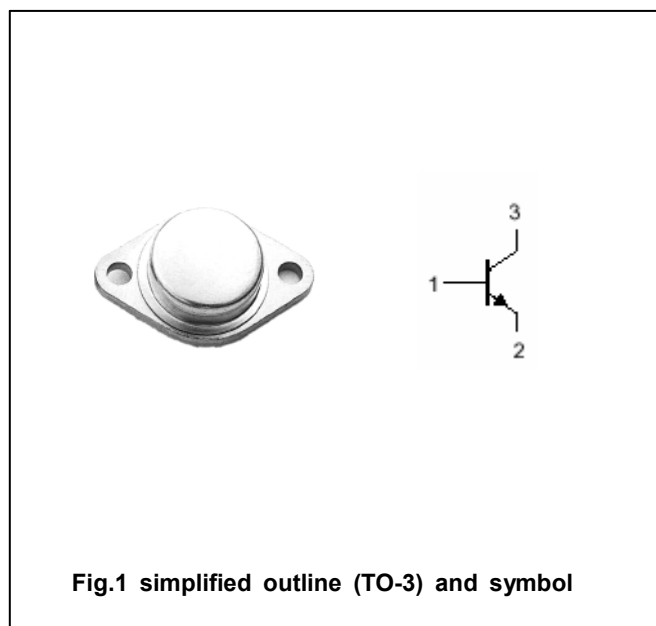


Fig.1 simplified outline (TO-3) and symbol

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

| SYMBOL    | PARAMETER                 |                        | CONDITIONS     | VALUE   | UNIT             |
|-----------|---------------------------|------------------------|----------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage    | BU326                  | Open emitter   | 800     | V                |
|           |                           | BU326A                 |                | 900     |                  |
| $V_{CEO}$ | Collector-emitter voltage | BU326                  | Open base      | 375     | V                |
|           |                           | BU326A                 |                | 400     |                  |
| $V_{EBO}$ | Emitter-base voltage      |                        | Open collector | 10      | V                |
| $I_C$     | Collector current         |                        |                | 6       | A                |
| $I_{CM}$  | Collector current-peak    |                        |                | 8       | A                |
| $I_B$     | Base current              |                        |                | 3       | A                |
| $P_T$     | Total power dissipation   | $T_c=25^\circ\text{C}$ |                | 75      | W                |
| $T_j$     | Junction temperature      |                        |                | -65~200 | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature       |                        |                | -65~200 | $^\circ\text{C}$ |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                           | MAX  | UNIT                      |
|---------------|-------------------------------------|------|---------------------------|
| $R_{th\ j-C}$ | Thermal resistance junction to case | 2.33 | $^\circ\text{C}/\text{W}$ |

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## CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            |        | CONDITIONS                                          | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--------|-----------------------------------------------------|-----|------|-----|------|
| V <sub>CE0(SUS)</sub> | Collector-emitter sustaining voltage | BU326  | I <sub>C</sub> =0.1A; I <sub>B</sub> =0             | 375 |      |     | V    |
|                       |                                      | BU326A |                                                     | 400 |      |     |      |
| V <sub>CEsat-1</sub>  | Collector-emitter saturation voltage |        | I <sub>C</sub> =2.5 A; I <sub>B</sub> =0.5A         |     |      | 1.5 | V    |
| V <sub>CEsat-2</sub>  | Collector-emitter saturation voltage |        | I <sub>C</sub> =4A; I <sub>B</sub> =1.25 A          |     |      | 3.0 | V    |
| V <sub>BEsat-1</sub>  | Base-emitter saturation voltage      |        | I <sub>C</sub> =2.5 A; I <sub>B</sub> =0.5A         |     |      | 1.4 | V    |
| V <sub>BEsat-2</sub>  | Base-emitter saturation voltage      |        | I <sub>C</sub> =4A; I <sub>B</sub> =1.25 A          |     |      | 1.6 | V    |
| I <sub>CES</sub>      | Collector cut-off current            | BU326  | V <sub>CE</sub> =800V; V <sub>BE</sub> =0           |     |      | 1   | mA   |
|                       |                                      | BU326A | V <sub>CE</sub> =900V; V <sub>BE</sub> =0           |     |      |     |      |
| I <sub>EBO</sub>      | Emitter cut-off current              |        | V <sub>EB</sub> =10V; I <sub>C</sub> =0             |     |      | 10  | mA   |
| h <sub>FE</sub>       | DC current gain                      |        | I <sub>C</sub> =1A ; V <sub>CE</sub> =5V            |     | 25   |     |      |
| f <sub>T</sub>        | Transition frequency                 |        | I <sub>C</sub> =0.2A ; V <sub>CE</sub> =10V; f=1MHz | 4.0 |      |     | MHz  |

## Switching times

|                 |              |                                                                                                  |  |  |     |    |
|-----------------|--------------|--------------------------------------------------------------------------------------------------|--|--|-----|----|
| t <sub>on</sub> | Turn-on time | I <sub>C</sub> =2.5A ;<br>I <sub>B1</sub> =0.5A; I <sub>B2</sub> =-1A<br>V <sub>CC</sub> =250V ; |  |  | 0.5 | μs |
| t <sub>s</sub>  | Storage time |                                                                                                  |  |  | 3.5 | μs |
| t <sub>f</sub>  | Fall time    |                                                                                                  |  |  | 0.5 | μs |

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PACKAGE OUTLINE

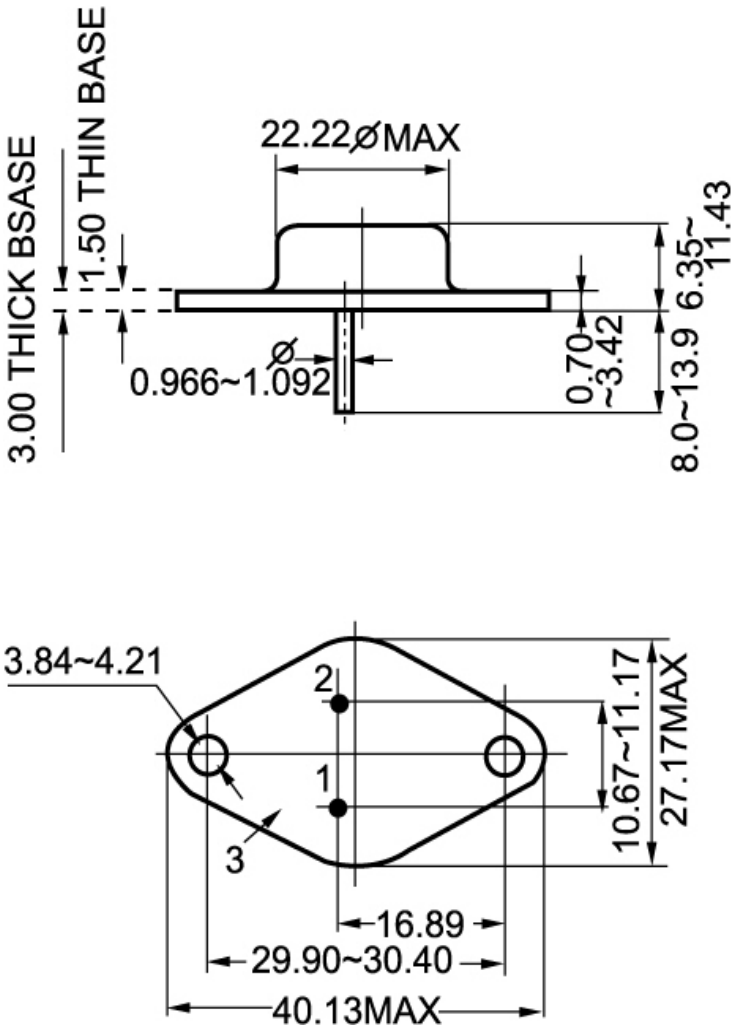


Fig.2 Outline dimensions