

Silicon NPN Power Transistors

2SD1433

DESCRIPTION

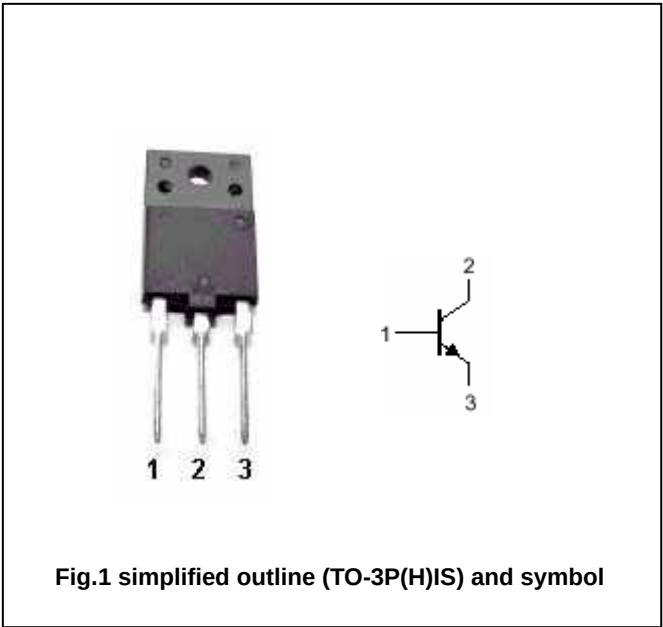
- With TO-3P(H)IS package
- High voltage ,high speed
- Low collector saturation voltage

APPLICATIONS

- Designed for use in TV and CRT horizontal output applications

PINNING

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



Absolute maximum ratings (T<sub>a</sub>=25℃)

| SYMBOL           | PARAMETER                 | CONDITIONS          | VALUE   | UNIT |
|------------------|---------------------------|---------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage    | Open emitter        | 1500    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage | Open base           | 600     | V    |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector      | 5       | V    |
| I <sub>C</sub>   | Collector current         |                     | 7       | A    |
| P <sub>D</sub>   | Total power dissipation   | T <sub>C</sub> =25℃ | 80      | W    |
| T <sub>j</sub>   | Junction temperature      |                     | 150     | ℃    |
| T <sub>stg</sub> | Storage temperature       |                     | -55~150 | ℃    |

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## CHARACTERISTICS

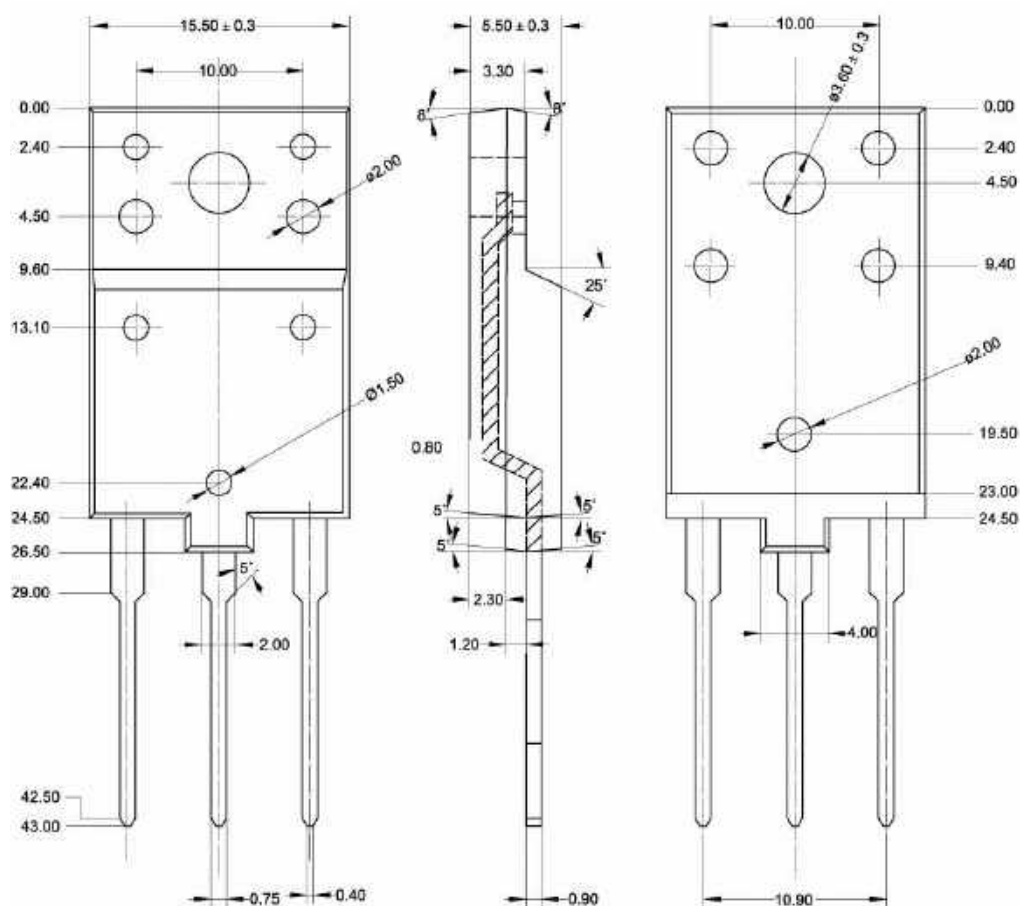
Tj=25°C unless otherwise specified

| SYMBOL        | PARAMETER                            | CONDITIONS                          | MIN | TYP. | MAX | UNIT    |
|---------------|--------------------------------------|-------------------------------------|-----|------|-----|---------|
| $V_{CE(sat)}$ | Collector-emitter saturation voltage | $I_C=6A$ ; $I_B=1.2A$               |     |      | 5.0 | V       |
| $V_{BE(sat)}$ | Base-emitter saturation voltage      | $I_C=6A$ ; $I_B=1.2A$               |     |      | 1.5 | V       |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=500V$ ; $I_E=0$             |     |      | 10  | $\mu A$ |
| $I_{EBO}$     | Emitter cut-off current              | $V_{EB}=5V$ ; $I_C=0$               |     |      | 1   | mA      |
| $h_{FE}$      | DC current gain                      | $I_C=1A$ ; $V_{CE}=5V$              | 8   |      |     |         |
| $f_T$         | Transition frequency                 | $I_C=0.1A$ ; $V_{CE}=10V$           |     | 3    |     | MHz     |
| $C_{OB}$      | Output capacitance                   | $I_E=0$ ; $V_{CB}=10V$ ; $f=1.0MHz$ |     | 165  |     | pF      |
| $t_f$         | Fall time                            | $I_C=6A$ ; $I_{B1}=1.2A$            |     |      | 1.0 | $\mu s$ |

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## PACKAGE OUTLINE



**Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)**