

## Silicon NPN Power Transistors

2SC5404

## DESCRIPTION

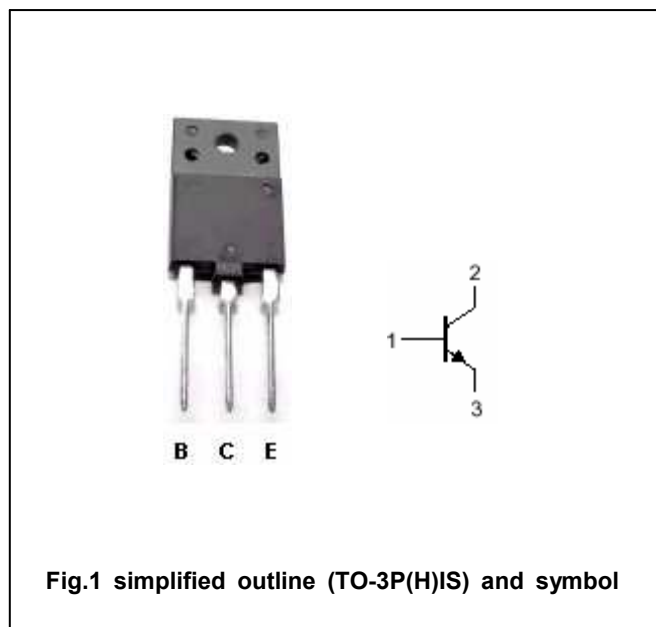
- With TO-3P(H)IS package
- High voltage;high speed
- Low collector saturation voltage

## APPLICATIONS

- Horizontal deflection output for high resolution display,color TV
- High speed switching applications

## PINNING

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

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

| SYMBOL    | PARAMETER                 | CONDITIONS             | VALUE   | UNIT             |
|-----------|---------------------------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage    | Open emitter           | 1500    | V                |
| $V_{CEO}$ | Collector-emitter voltage | Open base              | 600     | V                |
| $V_{EBO}$ | Emitter-base voltage      | Open collector         | 5       | V                |
| $I_C$     | Collector current         |                        | 9       | A                |
| $I_{CM}$  | Collector current-Peak    |                        | 18      | A                |
| $I_B$     | Base current              |                        | 4.5     | A                |
| $P_C$     | Total power dissipation   | $T_C=25^\circ\text{C}$ | 50      | W                |
| $T_j$     | Junction temperature      |                        | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature       |                        | -55~150 | $^\circ\text{C}$ |

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## CHARACTERISTICS

Tj=25°C unless otherwise specified

| SYMBOL        | PARAMETER                            | CONDITIONS                  | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|-----------------------------|-----|------|-----|------|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage  | $I_C=10mA; I_B=0$           | 600 |      |     | V    |
| $V_{CEsat}$   | Collector-emitter saturation voltage | $I_C=7A; I_B=1.75A$         |     |      | 3.0 | V    |
| $V_{BEsat}$   | Base-emitter saturation voltage      | $I_C=7A; I_B=1.75A$         |     |      | 1.5 | V    |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=1500V; I_E=0$       |     |      | 1.0 | mA   |
| $I_{EBO}$     | Emitter cut-off current              | $V_{EB}=5V; I_C=0$          |     |      | 10  | μA   |
| $h_{FE-1}$    | DC current gain                      | $I_C=1A; V_{CE}=5V$         | 10  |      | 40  |      |
| $h_{FE-2}$    | DC current gain                      | $I_C=7A; V_{CE}=5V$         | 4   |      | 8   |      |
| $C_{ob}$      | Collector output capacitance         | $I_E=0; V_{CB}=10V, f=1MHz$ |     | 115  |     | pF   |
| $f_T$         | Transition frequency                 | $I_E=0.1A; V_{CE}=10V$      |     | 2.5  |     | MHz  |

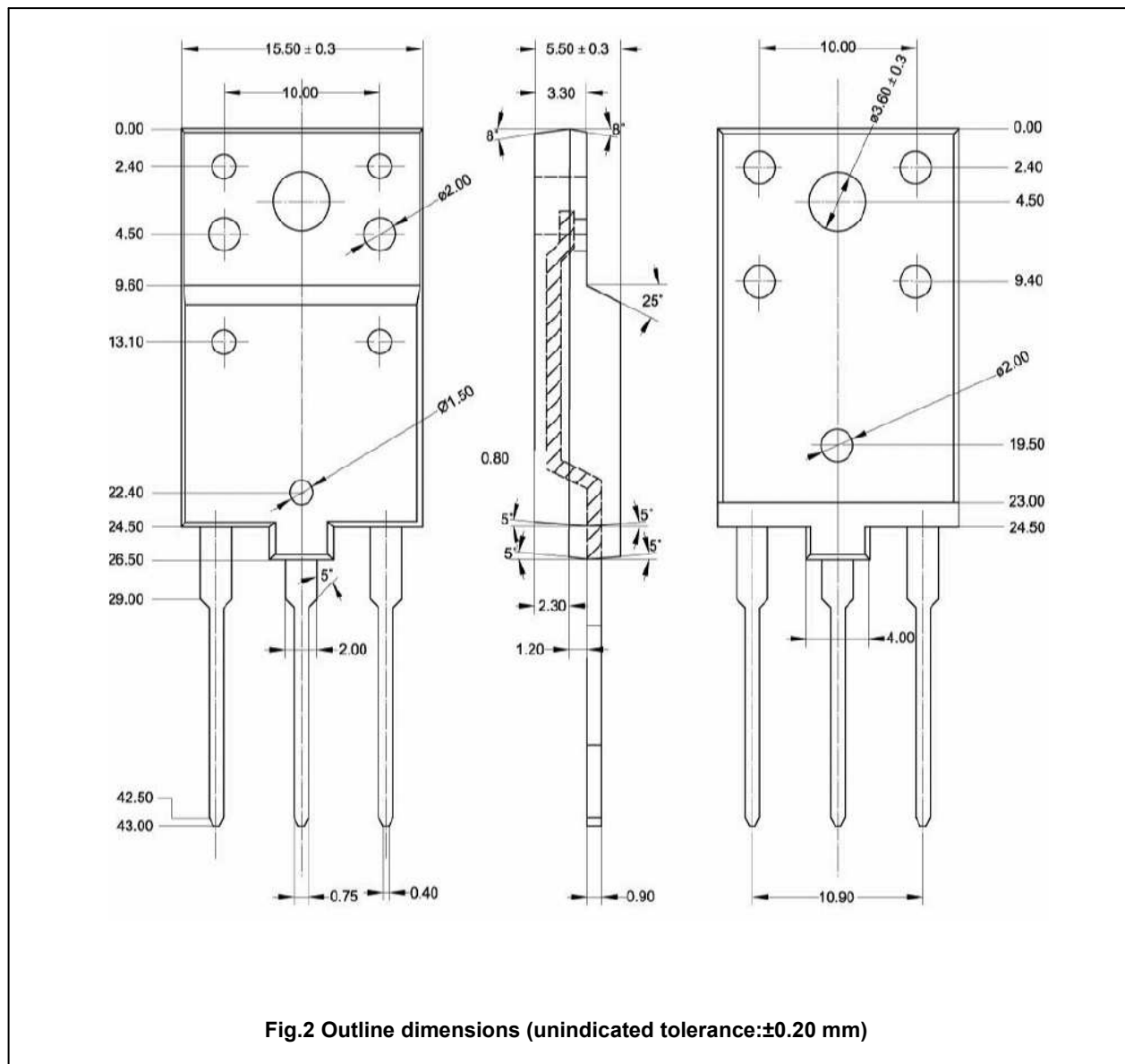
## Switching times

|       |              |                                                |  |      |     |    |
|-------|--------------|------------------------------------------------|--|------|-----|----|
| $t_s$ | Storage time | $I_{CP}=5.5A; I_{B1(end)}=1.1A$<br>$f_H=64kHz$ |  | 2.5  | 3.5 | μs |
| $t_f$ | Fall time    |                                                |  | 0.15 | 0.3 | μs |

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## PACKAGE OUTLINE



This datasheet has been downloaded from:

[www.DatasheetCatalog.com](http://www.DatasheetCatalog.com)

Datasheets for electronic components.