

**Silicon NPN Power Transistors**

**2SC4763**

**DESCRIPTION**

- With TO-3P(H)IS package
- High speed ,high speed
- Low saturation voltage
- Bult-in damper diode

**APPLICATIONS**

- Horizontal deflection output for medium resolution display

**PINNING**

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

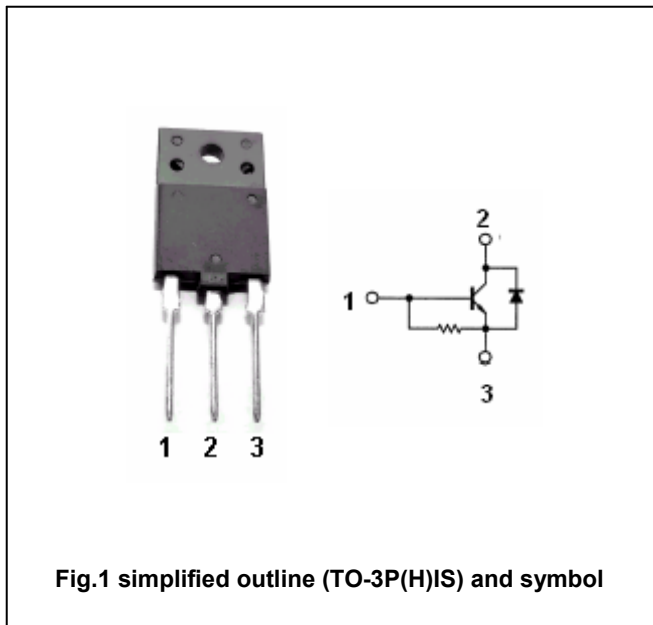


Fig.1 simplified outline (TO-3P(H)IS) and symbol

**Absolute maximum ratings(Ta=25°C)**

| 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           |                      | ±8      | A    |
| I <sub>CM</sub>  | Collector current-Peak      |                      | ±16     | A    |
| I <sub>B</sub>   | Base current                |                      | 4       | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 50      | W    |
| T <sub>j</sub>   | Junction temperature        |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature         |                      | -55~150 | °C   |

## Silicon NPN Power Transistors

## 2SC4763

## CHARACTERISTICS

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

| SYMBOL               | PARAMETER                            | CONDITIONS                                       | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =300mA ; I <sub>C</sub> =0        | 5   |      |     | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =6A; I <sub>B</sub> =1.2A         |     |      | 5   | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =6A; I <sub>B</sub> =1.2A         |     |      | 1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =1500V; I <sub>E</sub> =0        |     |      | 1   | mA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0           | 83  |      | 250 | mA   |
| h <sub>FE-1</sub>    | DC current gain                      | I <sub>C</sub> =1A ; V <sub>CE</sub> =5V         | 8   | 12   |     |      |
| h <sub>FE-2</sub>    | DC current gain                      | I <sub>C</sub> =6A ; V <sub>CE</sub> =5V         | 5   |      | 9   |      |
| C <sub>ob</sub>      | Collector output capacitance         | I <sub>E</sub> =0 ; V <sub>CB</sub> =10V, f=1MHz |     | 170  |     | pF   |
| V <sub>F</sub>       | Diode forward voltage                | I <sub>F</sub> =6A                               |     | 1.3  | 1.8 | V    |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =0.1A ; V <sub>CE</sub> =10V      | 1   | 3    |     | MHz  |

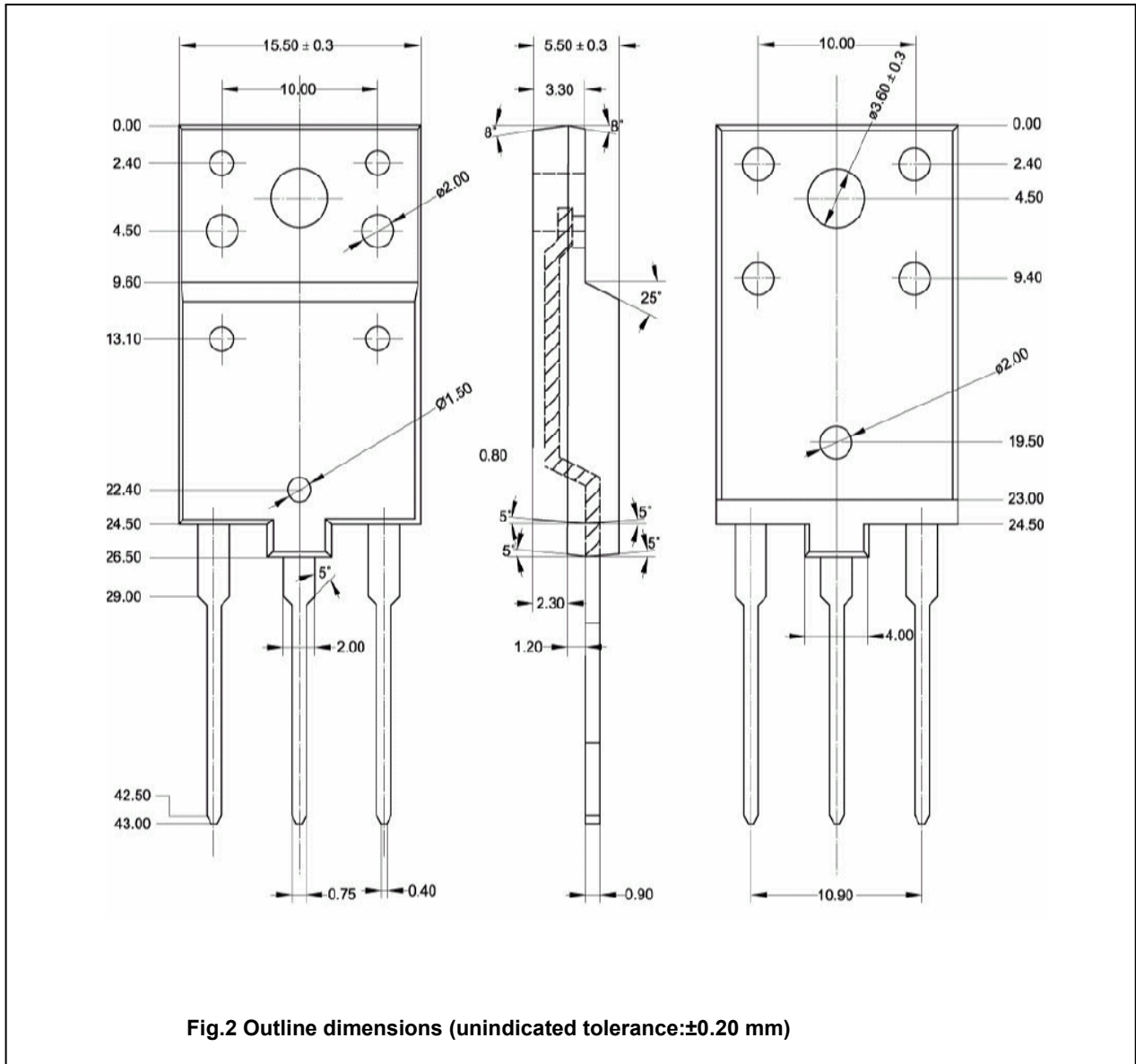
Switching times resistive load

|                |              |   |  |     |     |    |
|----------------|--------------|---|--|-----|-----|----|
| t <sub>s</sub> | Storage time | I <sub>CP</sub> =6A; I <sub>B1</sub> =1.2A<br>I <sub>B2</sub> =-2.4A; R <sub>L</sub> =33Ω |  | 1.8 | 3.0 | μs |
| t <sub>f</sub> | Fall time    |   |  | 0.1 | 0.2 | μs |

Silicon NPN Power Transistors

2SC4763

PACKAGE OUTLINE



Silicon NPN Power Transistors

2SC4763

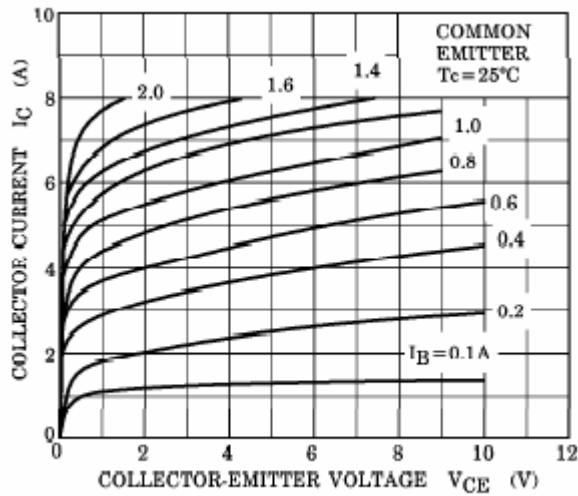


Fig.3 Static Characteristic

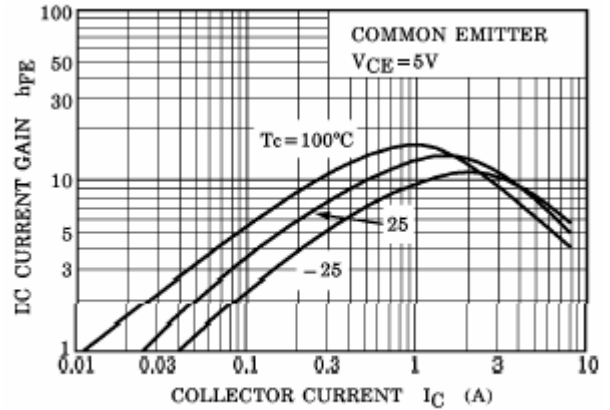


Fig.4 DC current Gain

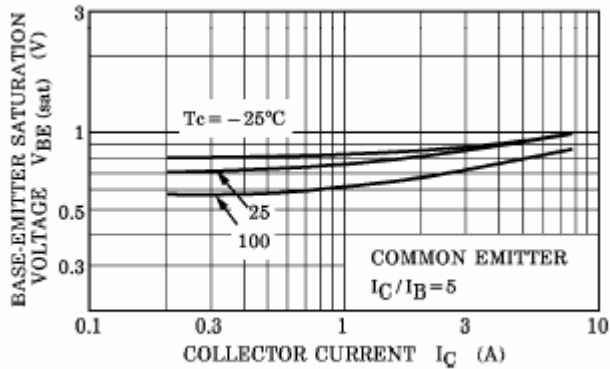


Fig.5 Base-Emitter Saturation Voltage

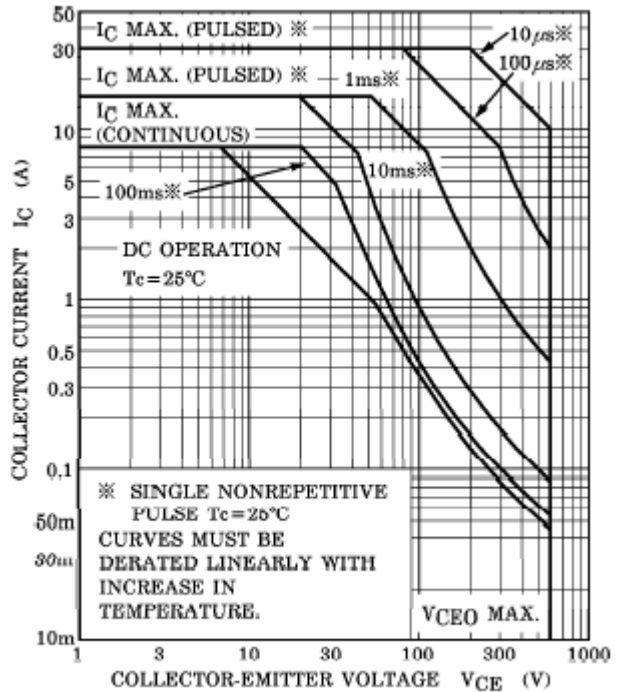


Fig.6 Safe Operating Area