

## Silicon PNP Power Transistors

## 2SA1490

## DESCRIPTION

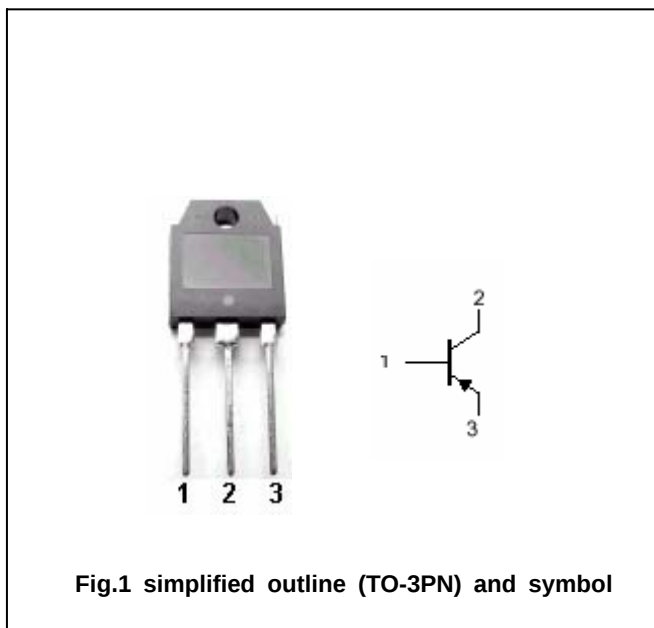
- With TO-3PN package
- Complement to type 2SC3854

## APPLICATIONS

- Audio and general purpose

## PINNING

| PIN | DESCRIPTION                          |
|-----|--------------------------------------|
| 1   | Base                                 |
| 2   | Collector;connected to mounting base |
| 3   | Emitter                              |

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

| SYMBOL    | PARAMETER                   | CONDITIONS               | VALUE   | UNIT             |
|-----------|-----------------------------|--------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter             | -120    | V                |
| $V_{CEO}$ | Collector-emitter voltage   | Open base                | -120    | V                |
| $V_{EBO}$ | Emitter-base voltage        | Open collector           | -6      | V                |
| $I_C$     | Collector current           |                          | -8      | A                |
| $I_B$     | Base current                |                          | -3      | A                |
| $P_C$     | Collector power dissipation | $T_C = 25^\circ\text{C}$ | 80      | W                |
| $T_j$     | Junction temperature        |                          | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |                          | -55~150 | $^\circ\text{C}$ |

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## CHARACTERISTICS

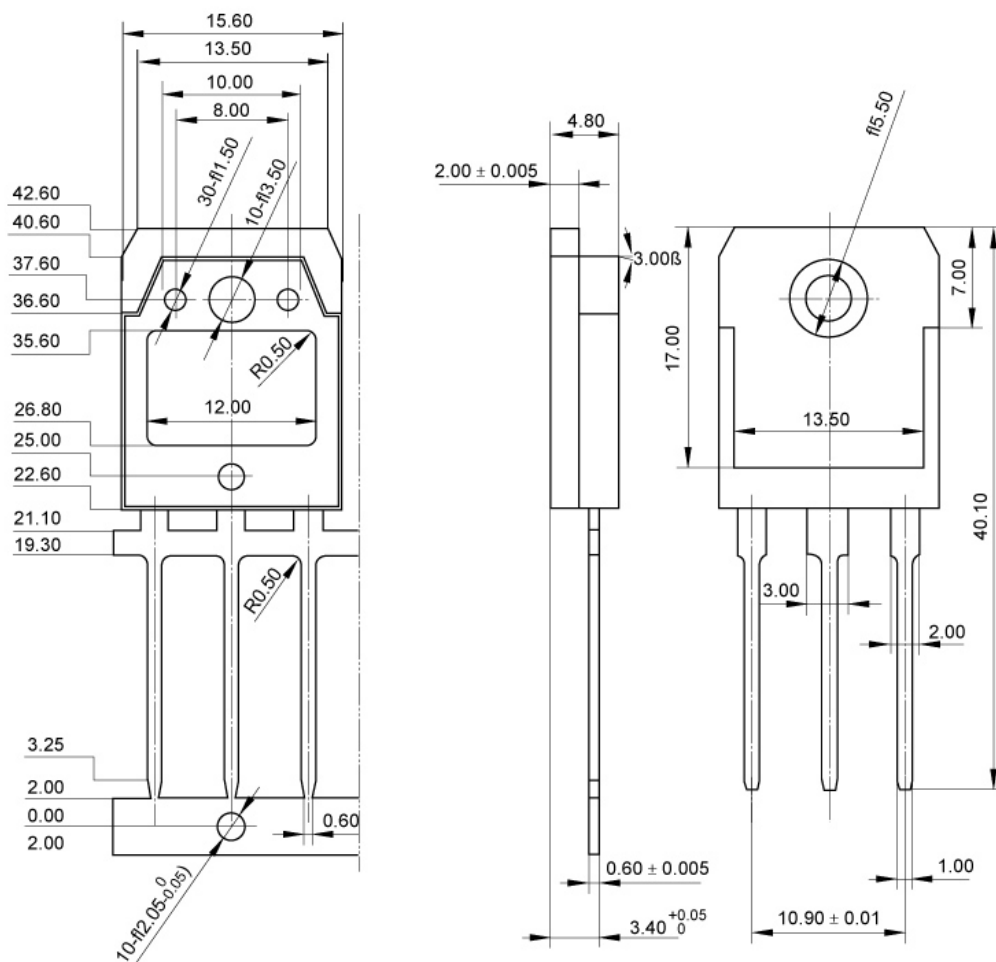
T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                   | MIN  | TYP. | MAX  | UNIT |
|----------------------|--------------------------------------|----------------------------------------------|------|------|------|------|
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =-50mA ; I <sub>B</sub> =0    | -120 |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-3A; I <sub>B</sub> =-0.3A   |      |      | -1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-120V; I <sub>E</sub> =0    |      |      | -100 | μ A  |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-6V; I <sub>C</sub> =0      |      |      | -100 | μ A  |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V   | 50   |      |      |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =0.5A ; V <sub>CE</sub> =-12V |      | 20   |      | MHz  |

## Switching times

|                 |              |                                                                                                               |  |      |  |     |
|-----------------|--------------|---------------------------------------------------------------------------------------------------------------|--|------|--|-----|
| t <sub>on</sub> | Turn-on time | I <sub>C</sub> =-4A; R <sub>L</sub> =10 Ω<br>I <sub>B1</sub> =-I <sub>B2</sub> =-0.4A<br>V <sub>CC</sub> =40V |  | 0.25 |  | μ s |
| t <sub>s</sub>  | Storage time |                                                                                                               |  | 0.7  |  | μ s |
| t <sub>f</sub>  | Fall time    |                                                                                                               |  | 0.2  |  | μ s |

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**Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1\text{mm}$ )**