

## DESCRIPTION

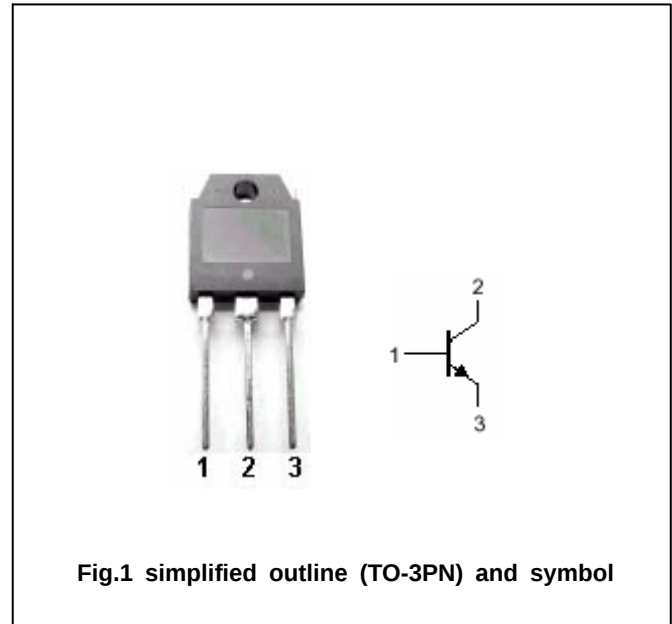
- With TO-3PN package
- Respectively complement to type MJE4350/4351/4352/4353
- DC current gain  $h_{FE}=8(\text{Min})@I_C=16A$

## APPLICATIONS

- For use in high power audio amplifier and switching regulator circuits

## PINNING

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



## Absolute maximum ratings( $T_a =$ )

| SYMBOL    | PARAMETER                   |         | CONDITIONS     | VALUE   | UNIT |
|-----------|-----------------------------|---------|----------------|---------|------|
| $V_{CBO}$ | Collector-base voltage      | MJE4340 | Open emitter   | 100     | V    |
|           |                             | MJE4341 |                | 120     |      |
|           |                             | MJE4342 |                | 140     |      |
|           |                             | MJE4343 |                | 160     |      |
| $V_{CEO}$ | Collector-emitter voltage   | MJE4340 | Open base      | 100     | V    |
|           |                             | MJE4341 |                | 120     |      |
|           |                             | MJE4342 |                | 140     |      |
|           |                             | MJE4343 |                | 160     |      |
| $V_{EBO}$ | Emitter-base voltage        |         | Open collector | 7       | V    |
| $I_C$     | Collector current           |         |                | 16      | A    |
| $I_{CM}$  | Collector current-peak      |         |                | 20      | A    |
| $I_B$     | Base current                |         |                | 5       | A    |
| $P_C$     | Collector power dissipation |         | $T_C=25$       | 125     | W    |
| $T_j$     | Junction temperature        |         |                | 150     |      |
| $T_{stg}$ | Storage temperature         |         |                | -65~150 |      |

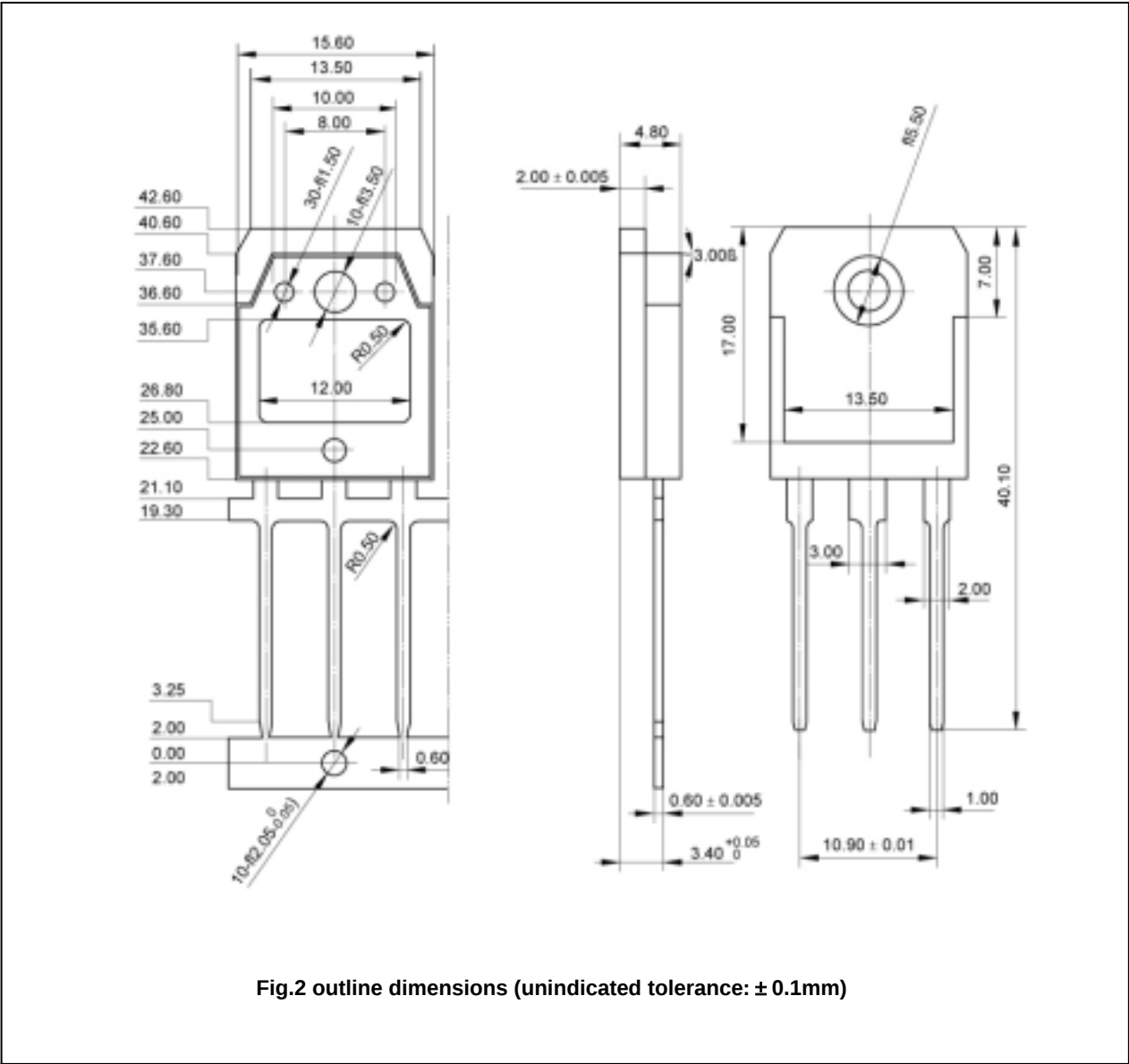
## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                           | MAX | UNIT |
|---------------|-------------------------------------|-----|------|
| $R_{th\ j-c}$ | Thermal resistance junction to case | 1.0 | /W   |

## CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            |         | CONDITIONS                                                                            | MIN | TYP. | MAX        | UNIT |
|-----------------------|--------------------------------------|---------|---------------------------------------------------------------------------------------|-----|------|------------|------|
| V <sub>CEQ(SUS)</sub> | Collector-emitter sustaining voltage | MJE4340 | I <sub>C</sub> =100mA ; I <sub>B</sub> =0                                             | 100 |      |            | V    |
|                       |                                      | MJE4341 |                                                                                       | 120 |      |            |      |
|                       |                                      | MJE4342 |                                                                                       | 140 |      |            |      |
|                       |                                      | MJE4343 |                                                                                       | 160 |      |            |      |
| V <sub>CEsat-1</sub>  | Collector-emitter saturation voltage |         | I <sub>C</sub> =8A ; I <sub>B</sub> =0.8A                                             |     |      | 2.0        | V    |
| V <sub>CEsat-2</sub>  | Collector-emitter saturation voltage |         | I <sub>C</sub> =16A; I <sub>B</sub> =2.0A                                             |     |      | 3.5        | V    |
| V <sub>BEsat</sub>    | Base-emitter saturation voltage      |         | I <sub>C</sub> =16A; I <sub>B</sub> =2.0A                                             |     |      | 3.9        | V    |
| V <sub>BE</sub>       | Base-emitter on voltage              |         | I <sub>C</sub> =16A ; V <sub>CE</sub> =4V                                             |     |      | 3.9        | V    |
| I <sub>CEO</sub>      | Collector cut-off current            | MJE4340 | V <sub>CE</sub> =50V; I <sub>B</sub> =0                                               |     |      | 0.75       | mA   |
|                       |                                      | MJE4341 | V <sub>CE</sub> =60V; I <sub>B</sub> =0                                               |     |      |            |      |
|                       |                                      | MJE4342 | V <sub>CE</sub> =70V; I <sub>B</sub> =0                                               |     |      |            |      |
|                       |                                      | MJE4343 | V <sub>CE</sub> =80V; I <sub>B</sub> =0                                               |     |      |            |      |
| I <sub>CEX</sub>      | Collector cut-off current            |         | V <sub>CE</sub> =RatedV <sub>CB0</sub> ; V <sub>BE</sub> =1.5V<br>T <sub>C</sub> =150 |     |      | 1.0<br>5.0 | mA   |
| I <sub>CBO</sub>      | Collector cut-off current            |         | V <sub>CB</sub> =RatedV <sub>CB</sub> ; I <sub>E</sub> =0                             |     |      | 0.75       | mA   |
| I <sub>EBO</sub>      | Emitter cut-off current              |         | V <sub>EB</sub> =7V; I <sub>C</sub> =0                                                |     |      | 1.0        | mA   |
| h <sub>FE-1</sub>     | DC current gain                      |         | I <sub>C</sub> =8A ; V <sub>CE</sub> =2V                                              | 15  |      |            |      |
| h <sub>FE-2</sub>     | DC current gain                      |         | I <sub>C</sub> =16A ; V <sub>CE</sub> =4V                                             | 8   |      |            |      |
| C <sub>OB</sub>       | Output capacitance                   |         | I <sub>E</sub> =0 ; V <sub>CB</sub> =10V;f=0.1MHz                                     |     |      | 800        | pF   |
| f <sub>T</sub>        | Transition frequency                 |         | I <sub>C</sub> =-1A ; V <sub>CE</sub> =20V;f=0.5MHz                                   | 1.0 |      |            | MHz  |



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