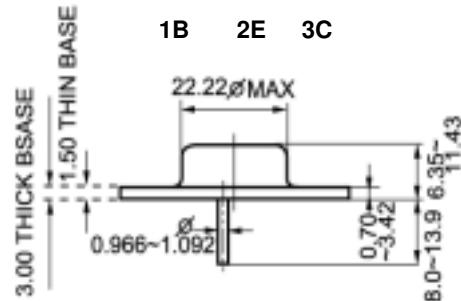


**2SC1030**

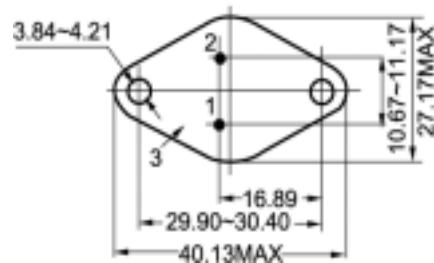
Silicon NPN Transistors

**◆ Features**

- With TO-3 package
- Low frequency power amplifications

**◆ Absolute Maximum Ratings Tc=25°C**

| SYMBOL           | PARAMETER                       | RATING  | UNIT |
|------------------|---------------------------------|---------|------|
| V <sub>CBO</sub> | Collector to base voltage       | 150     | V    |
| V <sub>CEO</sub> | Collector to emitter voltage    | 80      | V    |
| V <sub>EBO</sub> | Emitter to base voltage         | 6       | V    |
| I <sub>C</sub>   | Collector current-Continuous    | 6       | A    |
| P <sub>D</sub>   | Total Power Dissipation@TC=25°C | 50      | W    |
| T <sub>j</sub>   | Junction temperature            | 200     | °C   |
| T <sub>stg</sub> | Storage temperature             | -55~200 | °C   |



TO-3

**◆ Electrical Characteristics Tc=25°C**

| SYMBOL                 | PARAMETER                             | CONDITIONS                                 | MIN | TYP | MAX | UNIT |
|------------------------|---------------------------------------|--|-----|-----|-----|------|
| V <sub>CEO</sub>       | Collector-Emitter Sustaining Voltage  | I <sub>C</sub> =0.2A; I <sub>B</sub> =0    | 80  |     |     | V    |
| V <sub>CER</sub>       | Collector-Emitter Sustaining Voltage  |  |     |     |     |      |
| I <sub>CEO</sub>       | Collector Cutoff Current              | V <sub>CE</sub> =30V; I <sub>B</sub> =0    |     |     | 2.0 | mA   |
| I <sub>EBO</sub>       | Emitter Cutoff Current                | V <sub>EB</sub> =6V; I <sub>C</sub> =0     |     |     | 1.0 | mA   |
| I <sub>CBO</sub>       | Collector Cutoff Current              | V <sub>CB</sub> =30V; I <sub>E</sub> =0    |     |     | 1.0 | mA   |
| V <sub>EBO</sub>       | Base-emitter breakdown voltage        |  |     |     |     |      |
| V <sub>CE(sat-1)</sub> | Collector-emitter saturation voltages | I <sub>C</sub> =5.0A; I <sub>B</sub> =1.0A |     |     | 1.5 | V    |
| V <sub>CE(sat-2)</sub> | Collector-emitter saturation voltages |  |     |     |     |      |
| V <sub>CE(sat-3)</sub> | Collector-emitter saturation voltages |  |     |     |     |      |
| h <sub>FE-1</sub>      | Forward current transfer ratio        | I <sub>C</sub> =1A; V <sub>CE</sub> =5V    | 35  |     | 200 |      |
| h <sub>FE-2</sub>      | Forward current transfer ratio        | I <sub>C</sub> =5A; V <sub>CE</sub> =5V    | 22  |     |     |      |
| h <sub>FE-3</sub>      | Forward current transfer ratio        |  |     |     |     |      |
| V <sub>BE(on)</sub>    | Base-emitter On voltages              |  |     |     |     |      |
| f <sub>T</sub>         | Current Gain-Bandwidth Product        | I <sub>C</sub> =1A; V <sub>CE</sub> =5V    |     | 10  |     | MHz  |
| h <sub>fe</sub>        | Small-Signal Current Gain             |  |     |     |     |      |