

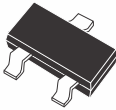
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# Central Semiconductor Corp.

**CMPT3019**

**NPN SILICON TRANSISTOR**



**SOT-23 CASE**

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CMPT3019 type is an NPN silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for very high current, general purpose amplifier applications.

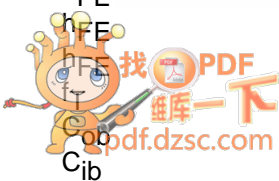
**Marking Code is C3A.**

## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

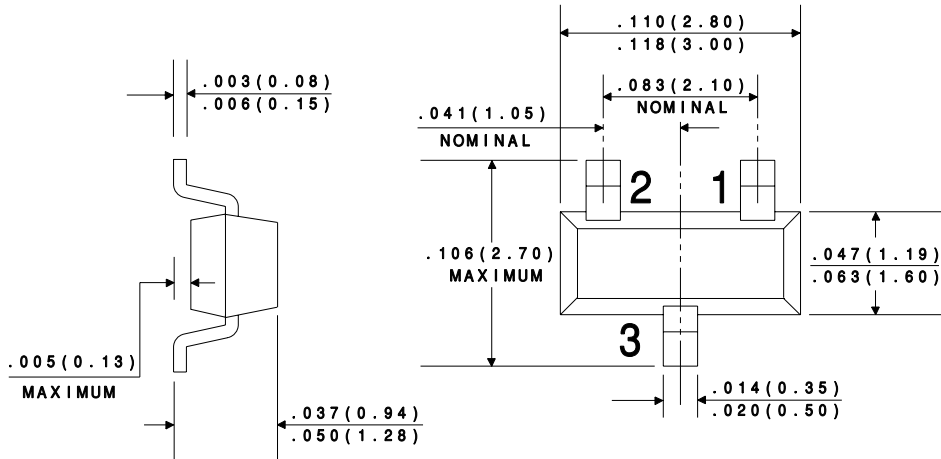
|   | SYMBOL                            |             | UNITS |
|---|-----------------------------------|-------------|-------|
| Collector-Base Voltage                        | V <sub>CB0</sub>                  | 120         | V     |
| Collector-Emitter Voltage                     | V <sub>CEO</sub>                  | 80          | V     |
| Emitter-Base Voltage                          | V <sub>EBO</sub>                  | 7.0         | V     |
| Collector Current                             | I <sub>C</sub>                    | 500         | A     |
| Collector Current (Peak)                      | I <sub>CM</sub>                   | 1.0         | A     |
| Power Dissipation                             | P <sub>D</sub>                    | 350         | mW    |
| Operating and Storage<br>Junction Temperature | T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C    |
| Thermal Resistance                            | θ <sub>JA</sub>                   | 357         | °C/W  |

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

| SYMBOL               | TEST CONDITIONS                                      | MIN | MAX | UNITS |
|----------------------|--|-----|-----|-------|
| I <sub>CBO</sub>     | V <sub>CB</sub> =90V                                 |     | 10  | nA    |
| I <sub>EBO</sub>     | V <sub>EB</sub> =5.0V                                |     | 10  | nA    |
| BV <sub>CB0</sub>    | I <sub>C</sub> =100μA                                | 120 |     | V     |
| BV <sub>CEO</sub>    | I <sub>C</sub> =30mA                                 | 80  |     | V     |
| BV <sub>EBO</sub>    | I <sub>E</sub> =100μA                                | 7.0 |     | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> =150mA, I <sub>B</sub> =15mA          |     | 0.2 | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> =500mA, I <sub>B</sub> =50mA          |     | 0.5 | V     |
| V <sub>BE(SAT)</sub> | I <sub>C</sub> =150mA, I <sub>B</sub> =15mA          |     | 1.1 | V     |
| h <sub>FE</sub>      | V <sub>CE</sub> =10V, I <sub>C</sub> =0.1mA          | 50  |     |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =10V, I <sub>C</sub> =10mA           | 90  |     |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =10V, I <sub>C</sub> =150mA          | 100 | 300 |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =10V, I <sub>C</sub> =500mA          | 50  |     |       |
| f <sub>T</sub>       | V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=1.0MHz | 100 |     | MHz   |
| C <sub>ib</sub>      | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz    |     | 12  | pF    |
|                      | V <sub>EB</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz   |     | 60  | pF    |



All dimensions in inches (mm).



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR