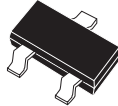


## CMPT5551

### NPN SILICON TRANSISTOR



SOT-23 CASE

### DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT5551 type is an NPN silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high voltage amplifier applications.

**Marking Code is 1FF.**

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

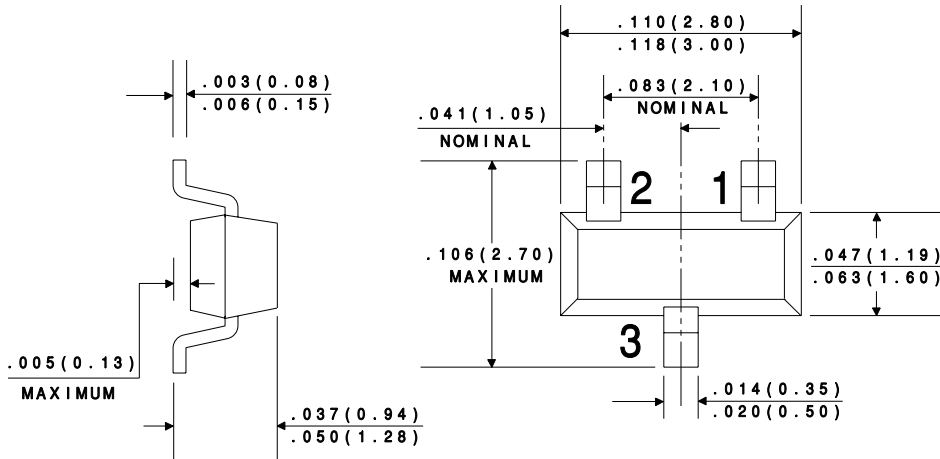
|                           | SYMBOL                            |             | UNITS |
|---------------------------|-----------------------------------|-------------|-------|
| Collector-Base Voltage    | V <sub>CB0</sub>                  | 180         | V     |
| Collector-Emitter Voltage | V <sub>CEO</sub>                  | 160         | V     |
| Emitter-Base Voltage      | V <sub>EBO</sub>                  | 6.0         | V     |
| Collector Current         | I <sub>C</sub>                    | 600         | mA    |
| Power Dissipation         | P <sub>D</sub>                    | 350         | mW    |
| Operating and Storage     |                                   |             |       |
| 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>CB0</sub>     | V <sub>CB</sub> =120V                                |     | 50   | nA    |
| I <sub>CB0</sub>     | V <sub>CB</sub> =120V, T <sub>A</sub> =100°C         |     | 50   | μA    |
| BV <sub>CB0</sub>    | I <sub>C</sub> =100μA                                | 180 |      | V     |
| BV <sub>CEO</sub>    | I <sub>C</sub> =1.0mA                                | 160 |      | V     |
| BV <sub>EBO</sub>    | I <sub>E</sub> =10μA                                 | 6.0 |      | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA          |     | 0.15 | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA          |     | 0.20 | V     |
| V <sub>BE(SAT)</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA          |     | 1.00 | V     |
| V <sub>BE(SAT)</sub> | I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA          |     | 1.00 | V     |
| h <sub>FE</sub>      | V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA         | 80  |      |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA          | 80  | 250  |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =5.0V, I <sub>C</sub> =50mA          | 30  |      |       |
| f <sub>T</sub>       | V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz | 100 | 300  | MHz   |
| C <sub>ob</sub>      | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz    |     | 6.0  | pF    |

| SYMBOL   | TEST CONDITIONS  | MIN | MAX | UNITS |
|----------|--|-----|-----|-------|
| $h_{fe}$ | $V_{CE}=10V, I_C=1.0mA, f=1.0kHz$                                  | 50  | 200 |       |
| $N_F$    | $V_{CE}=5.0V, I_C=200\mu A, R_S=10\Omega$<br>$f=10Hz$ to $15.7kHz$ |     | 8.0 | dB    |

All dimensions in inches (mm).



LEAD CODE:

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