

CMPT5179

NPN SILICON RF TRANSISTOR



SOT-23 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT5179 type is an NPN silicon RF transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for low noise, high frequency amplifier and high output oscillator applications.

Marking code is C7H.

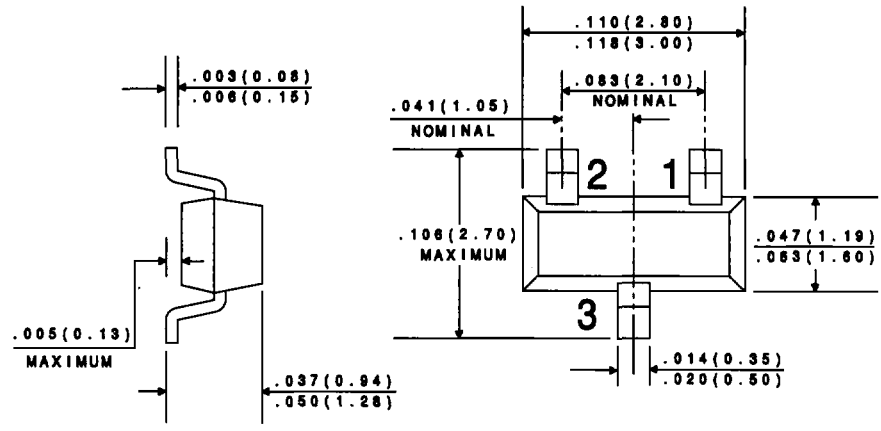
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

| | SYMBOL | | UNITS |
|---------------------------|----------------|-------------|-----------------------------|
| Collector-Base Voltage | V_{CB0} | 20 | V |
| Collector-Emitter Voltage | V_{CEO} | 12 | V |
| Emitter-Base Voltage | V_{EBO} | 2.5 | V |
| Collector Current | I_C | 50 | mA |
| Power Dissipation | P_D | 350 | mW |
| Operating and Storage | | | |
| Junction Temperature | T_J, T_{stg} | -65 to +150 | $^{\circ}\text{C}$ |
| Thermal Resistance | θ_{JA} | 357 | $^{\circ}\text{C}/\text{W}$ |

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|---------------|---|-----|------|-----|-------|
| I_{CBO} | $V_{CB}=15\text{V}$ | | | 20 | nA |
| BV_{CBO} | $I_C=10\mu\text{A}$ | 20 | | | V |
| BV_{CEO} | $I_C=3.0\text{mA}$ | 12 | | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 2.5 | | | V |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$ | | | 0.4 | V |
| $V_{BE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$ | | | 1.0 | V |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=3.0\text{mA}$ | 25 | | | |
| f_T | $V_{CE}=6.0\text{V}, I_C=5.0\text{mA}, f=100\text{MHz}$ | 900 | 1450 | | MHz |
| C_{cb} | $V_{CB}=10\text{V}, I_E=0, f=0.1$ to 1.0MHz | | | 1.0 | pF |
| h_{fe} | $V_{CE}=6.0\text{V}, I_C=2.0, f=1.0\text{kHz}$ | 25 | | | |
| G_{pe} | $V_{CE}=6.0\text{V}, I_C=5.0\text{mA}, f=200\text{MHz}$ | 15 | | | dB |
| NF | $V_{CE}=6.0\text{V}, I_C=1.5\text{mA}, R_S=50\Omega, f=200\text{MHz}$ | | | 4.5 | dB |

All dimensions in inches (mm).



LEAD CODE:

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

DATA SHEET