



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

**SURFACE MOUNT
NPN Digital Silicon Transistor**

VOLTAGE 50 Volts CURRENT 100 mAmpere

CHEMH3PT

APPLICATION

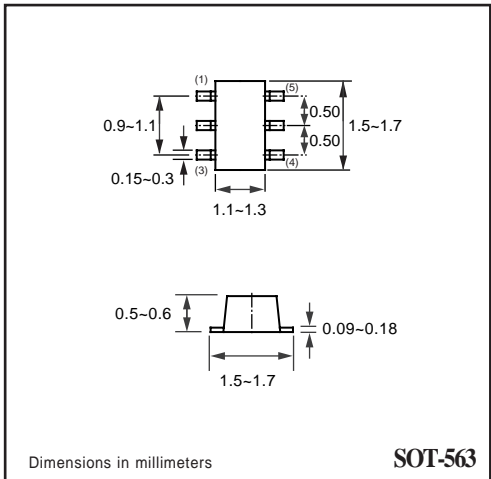
* Switching circuit, Inverter, Interface circuit, Driver circuit.

FEATURE

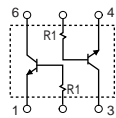
- * Small surface mounting type. (SOT-563)
- * High current gain.
- * Suitable for high packing density.
- * Low collector-emitter saturation.
- * High saturation current capability.
- * Two CHDTC143T chips in one package.
- * Built in bias resistor(R1=4.7kΩ, Typ.)

MARKING

*H3



CIRCUIT



LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|----------------------|---------------------------|----------------------------------|----------|------|
| V _{CBO} | Collector-Base voltage | | 50 | V |
| V _{CEO} | Collector-Emitter voltage | | 50 | V |
| V _{EBO} | Emitter-Base voltage | | 5 | V |
| I _{C(Max.)} | Collector current | | 100 | mA |
| P _D | Power dissipation | T _{amb} ≤ 25 °C, Note 1 | 150 | mW |
| T _{STG} | Storage temperature | | -55 +150 | °C |
| T _J | Junction temperature | | 150 | °C |

Note

1. Transistor mounted on an FR4 printed-circuit board.

RATING CHARACTERISTIC (CHEMH3PT)

CHARACTERISTICS

$T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified.

| SYMBOL | PARAMETER | CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|---------------|--------------------------------------|---|------|------|------|------------------|
| BVCBO | Collector-Base breakdown voltage | $I_C=50\mu\text{A}$ | 50.0 | – | – | V |
| BVCEO | Collector-Emitter breakdown voltage | $I_C=1\text{mA}$ | 50.0 | – | – | V |
| BVEBO | Emitter-Base breakdown voltage | $I_E=50\mu\text{A}$ | 5.0 | – | – | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation voltage | $I_C=5\text{mA}; I_B=0.25\text{mA}$ | – | – | 0.3 | V |
| I_{CBO} | Collector-Base current | $V_{CB}=50\text{V}$ | – | – | 0.5 | μA |
| I_{EBO} | Emitter-Base current | $V_{EB}=4\text{V}$ | – | – | 0.5 | μA |
| h_{FE} | DC current gain | $I_C=1\text{mA}; V_{CE}=5.0\text{V}$ | 100 | 250 | 600 | |
| R_1 | Input resistor | | 3.29 | 4.7 | 6.11 | $\text{K}\Omega$ |
| f_T | Transition frequency | $I_E=-5\text{mA}, V_{CE}=10.0\text{V}$ $f=100\text{MHz}$ | – | 250 | – | MHz |

Note

1. Pulse test: $t_p \leq 300\mu\text{s}; \delta \leq 0.02$.

RATING CHARACTERISTIC CURVES (CHEMH3PT)

Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

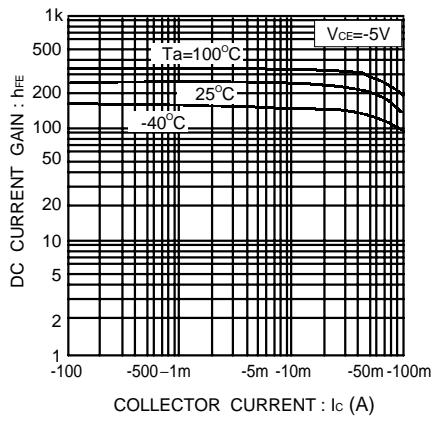


Fig.2 Collector-emitter saturation voltage vs. collector current

