



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

**SURFACE MOUNT
Dual Digital Silicon Transistor**

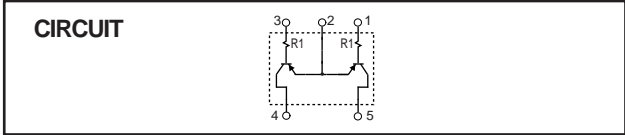
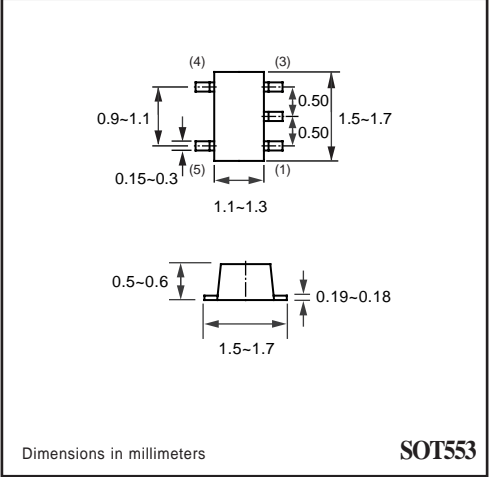
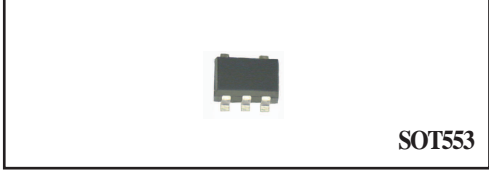
VOLTAGE 50 Volts CURRENT 100 mAmpere

CHEMA3PT

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

FEATURE
* Small surface mounting type. (SOT-553)
* High current gain.
* Suitable for high packing density.
* Low collector-emitter saturation.
* High saturation current capability.
* Both the CHDTA143T in one package.
* Built in bias resistor(R1=4.7kΩ, Typ.)

MARKING
* A3



LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC60134).

| 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 | | -55 +150 | °C |
| R _{θJ-S} | Thermal resistance , Note 1 | junction - soldering point | 140 | °C/W |

Note

2004-07

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

RATING CHARACTERISTIC (CHEMA3PT)

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 (CHEMA3PT)

Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

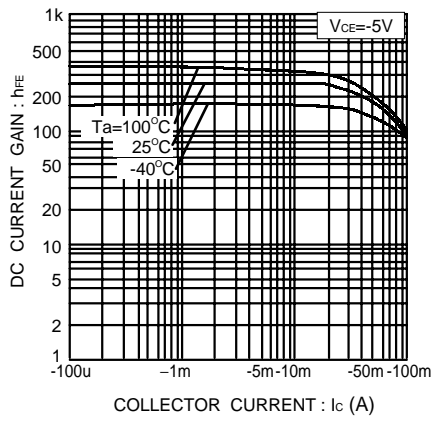


Fig.2 Collector-emitter saturation voltage vs. collector current

