



**CHENMKO ENTERPRISE CO.,LTD**

**SURFACE MOUNT  
Dual Silicon Transistor**

VOLTAGE 20 Volts CURRENT 300 mAmpere

**CHT1544RNPT**

Lead free devices

#### APPLICATION

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

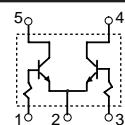
#### FEATURE

- \* Small surface mounting type. (SC-74A)
- \* High current gain.
- \* Suitable for high packing density.
- \* Low collector-emitter saturation.
- \* High saturation current capability.
- \* Both the NPN digital silicon transistor in one package.
- \* Built in bias resistor( $R_1=2.2\text{k}\Omega$ , Typ.)

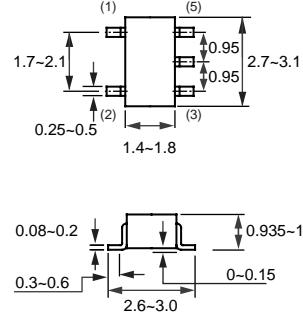
#### MARKING

- \*HFE(A) : 44A
- \*HFE(B) : 44B

#### CIRCUIT



**SC-74A**



**SC-74A**

#### 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   |  | 20       | V                         |
| $V_{EBO}$        | Emitter-Base voltage        |  | 25       | V                         |
| $I_c$            | Collector current           |  | 300      | mA                        |
| $P_D$            | Collector Power dissipation | $T_{amb} \leq 25^\circ\text{C}$ , Note 1 | 300      | mW                        |
| $T_{STG}$        | Storage temperature         |  | -55 +150 | $^\circ\text{C}$          |
| $T_J$            | Junction temperature        |  | +150     | $^\circ\text{C}$          |
| $R_{\theta J-S}$ | Thermal resistance , Note 1 | junction - soldering point               | 350      | $^\circ\text{C}/\text{W}$ |

#### Note

1. Total rating

## RATING CHARACTERISTIC ( CHT1544RNPT )

### CHARACTERISTICS

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

| SYMBOL        | PARAMETER                            | CONDITIONS                           | MIN. | TYP. | MAX. | UNIT             |
|---------------|--------------------------------------|--------------------------------------|------|------|------|------------------|
| $I_{CBO}$     | Collector cutoff current             | $V_{CB}=50\text{V}$                  | —    | —    | 0.1  | $\mu\text{A}$    |
| $I_{EBO}$     | Emitter cutoff current               | $V_{EB}=25\text{V}$                  | —    | —    | 0.1  | $\mu\text{A}$    |
| $V_{CE(sat)}$ | Collector-emitter saturation voltage | $I_C/I_B=10\text{mA}/1\text{mA}$     | —    | —    | 0.1  | V                |
| $h_{FE}$      | DC current gain                      | $I_C=4\text{mA}; V_{CE}=2.0\text{V}$ | 200  | —    | 1200 |                  |
| $R_1$         | Input resistor                       |                                      | 1.54 | 2.2  | 2.86 | $\text{k}\Omega$ |
| $f_T$         | Transition frequency                 | $I_C=4\text{mA}, V_{CE}=6.0\text{V}$ | —    | 30   | —    | MHz              |

#### Note

1. $h_{FE}$  Classification A: 200 to 700, B: 350 to 1200

## RATING CHARACTERISTIC CURVES ( CHT1544RNPT )

### Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

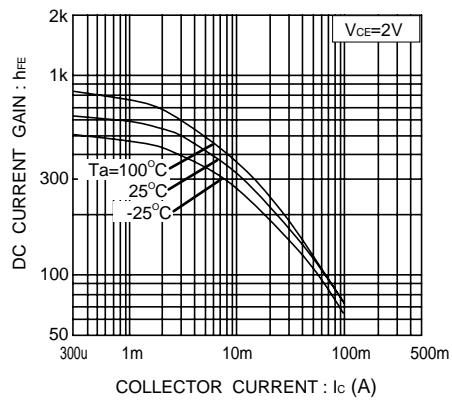


Fig.2 Collector-emitter saturation voltage vs. collector current

