

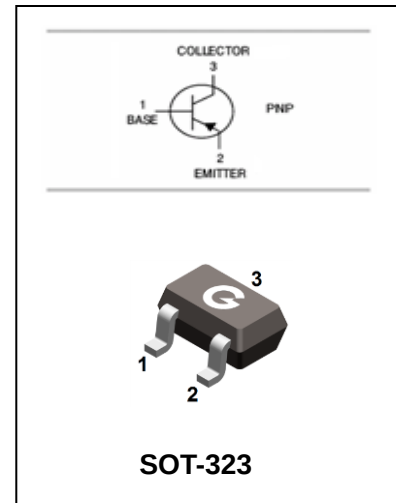
## PNP Silicon Epitaxial Planar Transistor

**TKTA2014**

### FEATURES

- Power dissipation ( $P_C=200\text{mW}$ )
- Excellent  $h_{FE}$  Linearity
- Complementary to TKTC4075
- Small package
- Halogen free
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

**HF**



### APPLICATIONS

- General purpose application and switching application

### ORDERING INFORMATION

| Type No.   | Marking | Package Code |
|------------|---------|--------------|
| TKTA2014-O | SO      | SOT-323      |
| TKTA2014-Y | SY      | SOT-323      |
| TKTA2014-G | SG      | SOT-323      |

### MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Symbol         | Parameter                        | Value       | Units            |
|----------------|----------------------------------|-------------|------------------|
| $V_{CBO}$      | Collector-Base Voltage           | -50         | V                |
| $V_{CEO}$      | Collector-Emitter Voltage        | -50         | V                |
| $V_{EBO}$      | Emitter-Base Voltage             | -5          | V                |
| $I_C$          | Collector Current -Continuous    | -150        | mA               |
| $P_C$          | Collector Dissipation            | 100         | mW               |
| $T_j, T_{stg}$ | Junction and Storage Temperature | -55 to +150 | $^\circ\text{C}$ |

# PNP Silicon Epitaxial Planar Transistor

**TKTA2014**

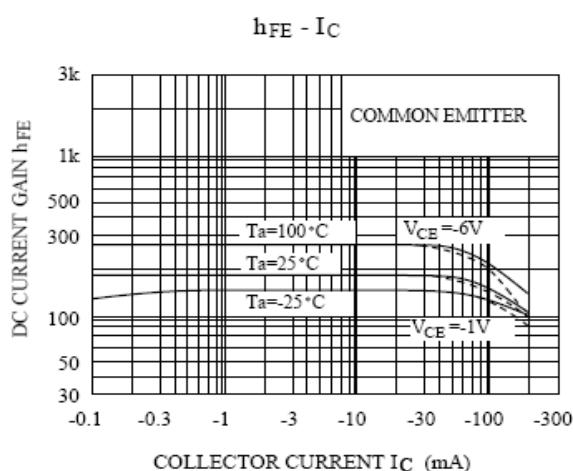
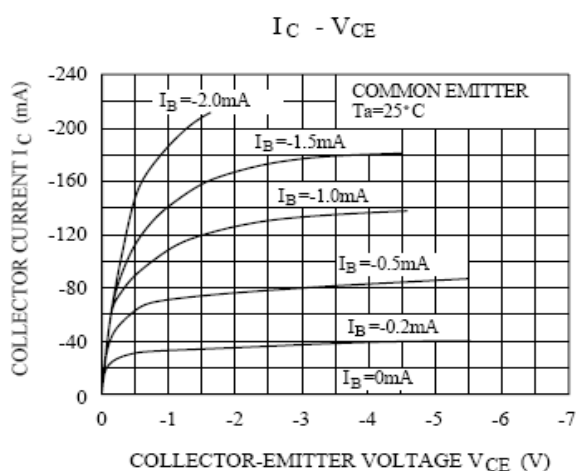
## ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter                            | Symbol        | Test conditions                                       | MIN | TYP  | MAX  | UNIT    |
|--------------------------------------|---------------|-------------------------------------------------------|-----|------|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -0.1mA, I_E = 0$                               | -50 |      |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -1mA, I_B = 0$                                 | -50 |      |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -0.1mA, I_C = 0$                               | -5  |      |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -50V, I_E = 0$                              |     |      | -0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5V, I_C = 0$                               |     |      | -0.1 | $\mu A$ |
| DC current gain                      | $h_{FE}$      | $V_{CE} = -6V, I_C = -2mA$                            | 70  |      | 400  |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100mA, I_B = -10mA$                           |     | -0.1 | -0.3 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = -10V, I_C = -1mA$                           | 80  |      |      | MHz     |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -10V, I_E = 0, f = 1MHz$                    |     | 4    | 7    | pF      |
| Noise figure                         | NF            | $V_{CE} = 6V, I_C = 0.1mA, f = 1KHz, R_g = 10K\Omega$ |     | 1.0  | 10   | dB      |

## CLASSIFICATION OF $h_{FE}$

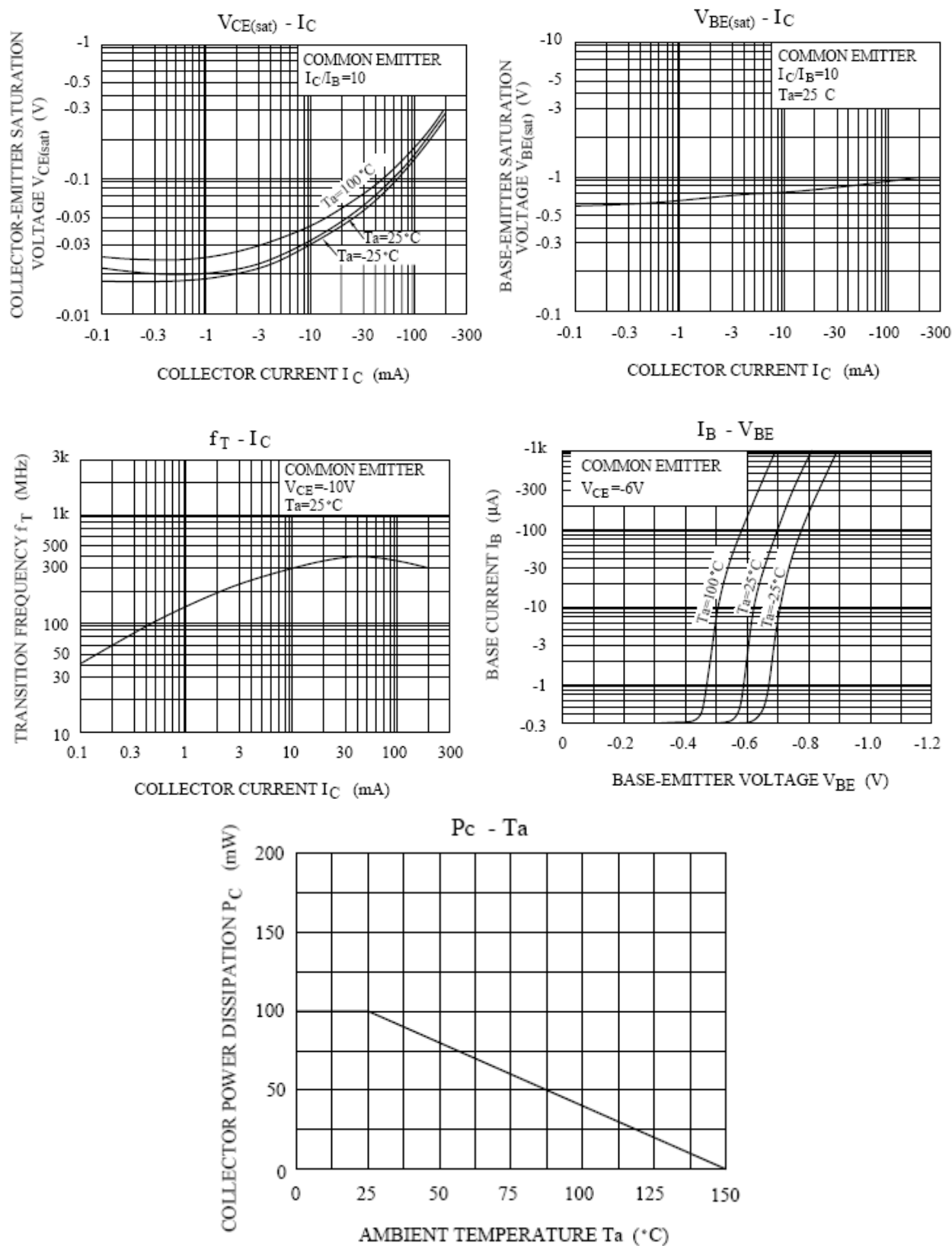
| Rank    | O      | Y       | G       |
|---------|--------|---------|---------|
| Range   | 70-140 | 120-240 | 200-400 |
| marking | SO     | SY      | SG      |

## TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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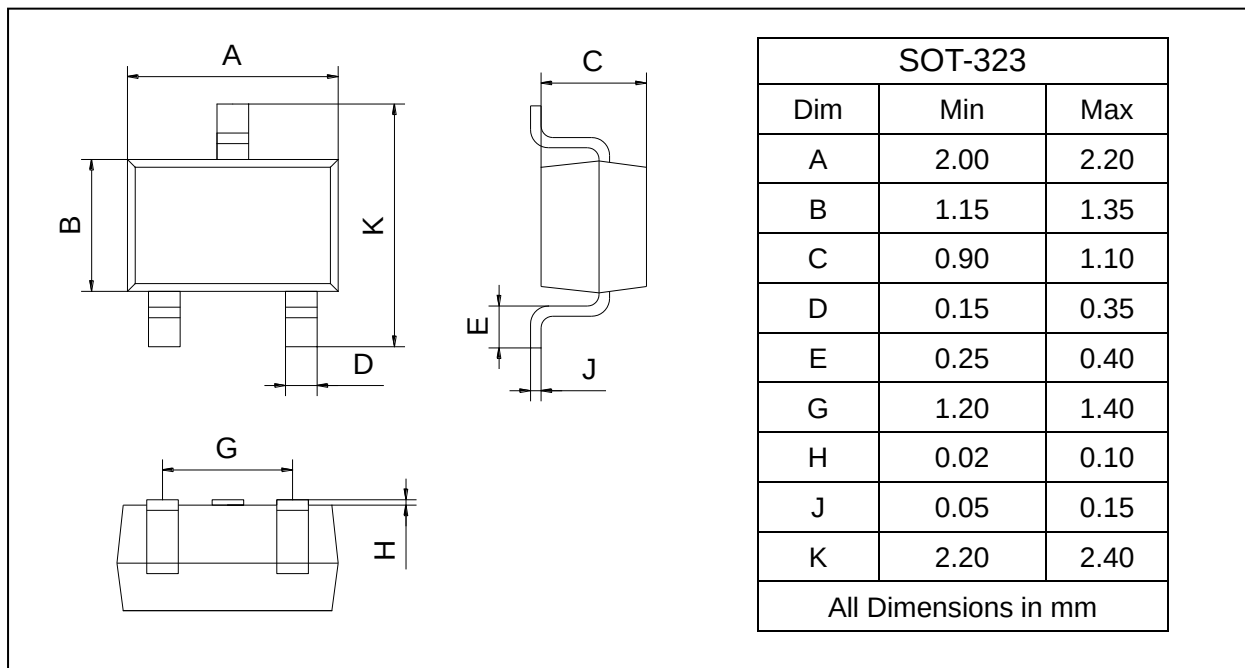
## PNP Silicon Epitaxial Planar Transistor

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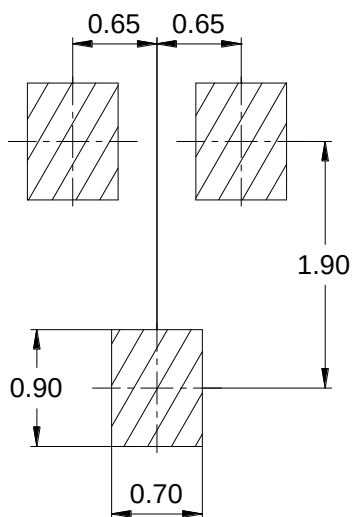
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



### SOLDERING FOOTPRINT



Unit: mm

### PACKAGE INFORMATION

| Device   | Package | Shipping               |
|----------|---------|------------------------|
| TKTA2014 | SOT-323 | 3000 pcs / Tape & Reel |