



# DTA124T

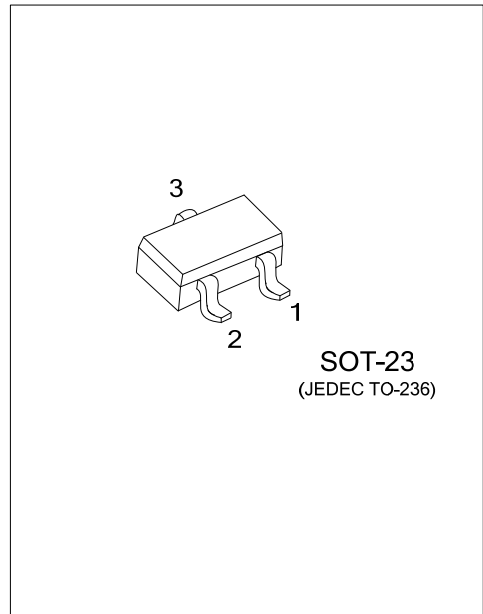
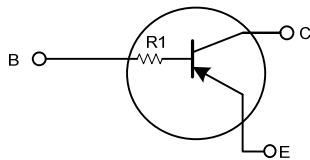
## PNP SILICON TRANSISTOR

### DIGITAL TRANSISTORS (BUILT- IN BIAS RESISTORS)

■ FEATURES

- \* Built-in bias resistors that implies easy ON/OFF applications.
- \* The bias resistors are thin-film resistors with complete isolation to allow positive input.

■ EQUIVALENT CIRCUIT



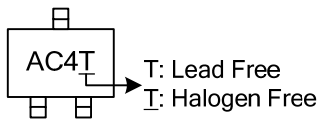
■ ORDERING INFORMATION

| Ordering Number |                | Package | Pin Assignment |   |   | Packing   |
|-----------------|----------------|---------|----------------|---|---|-----------|
| Lead Free       | Halogen Free   |         | 1              | 2 | 3 |           |
| DTA124TL-AE3-R  | DTA124TG-AE3-R | SOT-23  | E              | B | C | Tape Reel |

Note: Pin Assignment: E: Emitter, B: Base, C: Collector

|   |   |
|---|---|
| <p>DAT124TL-AE3-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Free</p> | <p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23</p> <p>(3) G: Halogen Free, L: Lead Free</p> |
|---|---|

■ MARKING



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

| PARAMETER                   | SYMBOL    | RATINGS  | UNIT             |
|-----------------------------|-----------|----------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | -50      | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | -50      | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | -5       | V                |
| Collector Current           | $I_C$     | -100     | mA               |
| Collector Power Dissipation | $P_c$     | 200      | mW               |
| Junction Temperature        | $T_J$     | 150      | $^\circ\text{C}$ |
| Storage Temperature         | $T_{STG}$ | -55~+150 | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

| PARAMETER                            | SYMBOL        | TEST CONDITIONS                                       | MIN  | TYP | MAX  | UNIT          |
|--------------------------------------|---------------|---|------|-----|------|---------------|
| Collector-Base Breakdown Voltage     | $BV_{CBO}$    | $I_C=-50\mu\text{A}$                                  | -50  |     |      | V             |
| Collector-Emitter Breakdown Voltage  | $BV_{CEO}$    | $I_C=-1\text{mA}$                                     | -50  |     |      | V             |
| Emitter-Base Breakdown Voltage       | $BV_{EBO}$    | $I_E=-50\mu\text{A}$                                  | -5   |     |      | V             |
| Collector Cutoff Current             | $I_{CBO}$     | $V_{CB}=-50\text{V}$                                  |      |     | -0.5 | $\mu\text{A}$ |
| Emitter Cutoff Current               | $I_{EBO}$     | $V_{EB}=-4\text{V}$                                   |      |     | -0.5 | $\mu\text{A}$ |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=-5\text{mA}, I_B=-0.5\text{mA}$                  |      |     | -0.3 | V             |
| DC Current Transfer Ratio            | $h_{FE}$      | $V_{CE}=-5\text{V}, I_C=-1\text{mA}$                  | 100  | 250 | 600  |               |
| Transition Frequency (Note)          | $f_T$         | $V_{CE}=-10\text{V}, I_E=5\text{mA}, f=100\text{MHz}$ |      | 250 |      | MHz           |
| Input Resistance                     | R1            |   | 15.4 | 22  | 28.6 | k $\Omega$    |

Note: Transition frequency of the device

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