



查询"DTC143TL-AE3-R"供应商

UNISONIC TECHNOLOGIES CO., LTD

## DTC143T

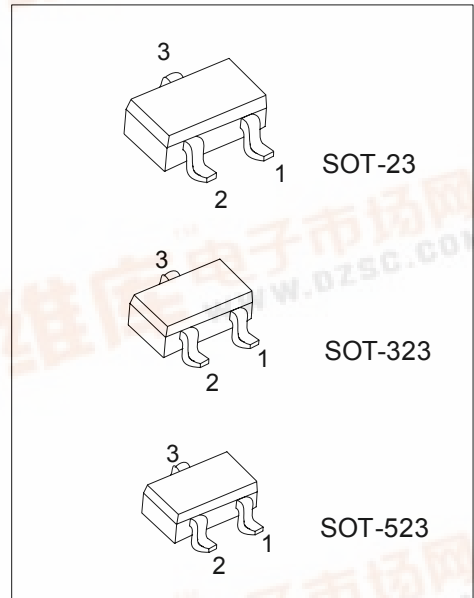
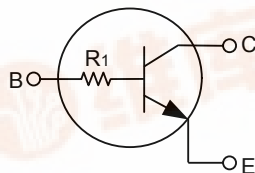
### NPN SILICON TRANSISTOR

## NPN DIGITAL TRANSISTOR (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 negative input.

### EQUIVALENT CIRCUIT



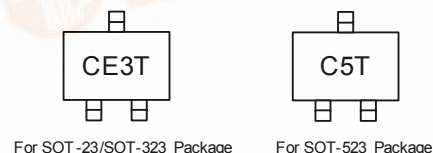
\* Pb-free plating product number: DTC143TL

### ORDERING INFORMATION

| Order Number  |                   | Package | Pin Assignment |   |   | Packing   |
|---------------|-------------------|---------|----------------|---|---|-----------|
| Normal        | Lead Free Plating |         | 1              | 2 | 3 |           |
| DTC143T-AE3-R | DTC143TL-AE3-R    | SOT-23  | E              | B | C | Tape Reel |
| DTC143T-AL3-R | DTC143TL-AL3-R    | SOT-323 | E              | B | C | Tape Reel |
| DTC143T-AN3-R | DTC143TL-AN3-R    | SOT-523 | E              | B | C | Tape Reel |

|                                                                                               |                                                                                                                          |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <p>DTC143TL-AE3-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Plating</p> | <p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p> |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|

### MARKING



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C , unless otherwise specified )

| 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 | SOT-523        | $P_C$     | 150      | mW   |
|                             | SOT-23/SOT-323 |           | 200      | mW   |
| Junction Temperature        |                | $T_J$     | +150     |      |
| Storage Temperature         |                | $T_{STG}$ | -55~+150 |      |

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

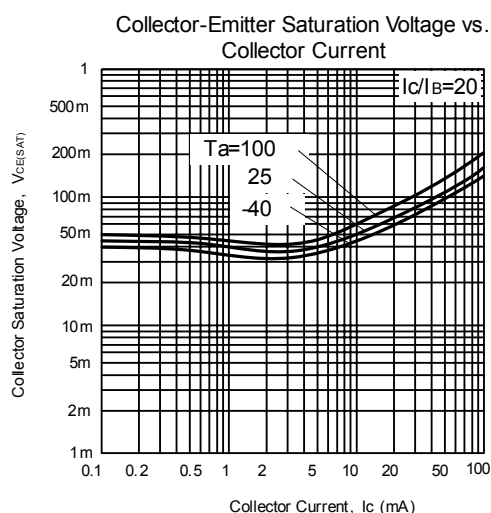
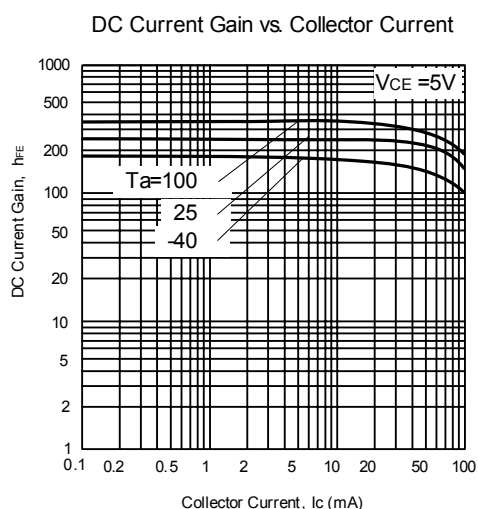
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified.)

| PARAMETER                            | SYMBOL        | TEST CONDITIONS                         | MIN  | TYP | MAX  | UNIT       |
|--------------------------------------|---------------|-----------------------------------------|------|-----|------|------------|
| Collector-Base Breakdown Voltage     | $BV_{CBO}$    | $I_C = 50\mu A$                         | 50   |     |      | V          |
| Collector-Emitter Breakdown Voltage  | $BV_{CEO}$    | $I_C = 1mA$                             | 50   |     |      | V          |
| Emitter-Base Breakdown Voltage       | $BV_{EBO}$    | $I_E = 50\mu A$                         | 5    |     |      | V          |
| Collector Cut-off Current            | $I_{CBO}$     | $V_{CB} = 50V$                          |      |     | 0.5  | $\mu A$    |
| Emitter Cut-off Current              | $I_{EBO}$     | $V_{EB} = 4V$                           |      |     | 0.5  | $\mu A$    |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C = 5mA, I_B = 0.25mA$               |      |     | 0.3  | V          |
| DC Current Gain                      | $h_{FE}$      | $V_{CE} = 5V, I_C = 1mA$                | 100  | 250 | 600  |            |
| Input Resistance                     | $R_i$         |                                         | 3.29 | 4.7 | 6.11 | k $\Omega$ |
| Transition Frequency                 | $f_T$         | $V_{CE} = 10V, I_E = 5mA, f = 100MHz$ * |      | 250 |      | MHz        |

\* Transition frequency of the device.

■ TYPICAL CHARACTERISTICS



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