

# DRC4114T

## Silicon NPN epitaxial planar type

For digital circuits

Complementary to DRA4114T

DRC2114T in NS through hole type package

### ■ Features

- High forward current transfer ratio  $h_{FE}$  with excellent linearity
- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- Contributes to miniaturization of sets, mount area reduction
- Eco-friendly Halogen-free package

### ■ Packaging

DRC4114T0A Radial type : 5000 pcs / carton

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter                             | Symbol    | Rating      | Unit             |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | $V_{CBO}$ | 50          | V                |
| Collector-emitter voltage (Base open) | $V_{CEO}$ | 50          | V                |
| Collector current                     | $I_C$     | 100         | mA               |
| Total power dissipation               | $P_T$     | 300         | mW               |
| Junction temperature                  | $T_J$     | 150         | $^\circ\text{C}$ |
| Storage temperature                   | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

### ■ Package

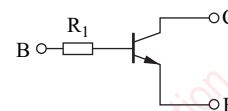
- Code  
NS-B2-B-B  
Package dimension clicks here.→

### ■ Pin Name

- 1: Emitter
- 2: Collector
- 3: Base

### ■ Marking Symbol: ND

### ■ Internal Connection



| Resistance value | $R_1$ | 10 | k $\Omega$ |
|------------------|-------|----|------------|
|                  |       |    |            |

### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter                                    | Symbol        | Conditions                                   | Min  | Typ | Max  | Unit          |
|--|---------------|--|------|-----|------|---------------|
| Collector-base voltage (Emitter open)        | $V_{CBO}$     | $I_C = 10 \mu\text{A}, I_E = 0$              | 50   |     |      | V             |
| Collector-emitter voltage (Base open)        | $V_{CEO}$     | $I_C = 2 \text{mA}, I_B = 0$                 | 50   |     |      | V             |
| Collector-base cutoff current (Emitter open) | $I_{CBO}$     | $V_{CB} = 50 \text{V}, I_E = 0$              |      |     | 0.1  | $\mu\text{A}$ |
| Collector-emitter cutoff current (Base open) | $I_{CEO}$     | $V_{CE} = 50 \text{V}, I_B = 0$              |      |     | 0.5  | $\mu\text{A}$ |
| Emitter-base cutoff current (Collector open) | $I_{EBO}$     | $V_{EB} = 6 \text{V}, I_C = 0$               |      |     | 0.01 | mA            |
| Forward current transfer ratio               | $h_{FE}$      | $V_{CE} = 10 \text{V}, I_C = 5 \text{mA}$    | 160  |     | 460  | —             |
| Collector-emitter saturation voltage         | $V_{CE(sat)}$ | $I_C = 10 \text{mA}, I_B = 0.5 \text{mA}$    |      |     | 0.25 | V             |
| Input voltage (ON)                           | $V_{I(on)}$   | $V_{CE} = 0.2 \text{V}, I_C = 5 \text{mA}$   | 1.2  |     |      | V             |
| Input voltage (OFF)                          | $V_{I(off)}$  | $V_{CE} = 5 \text{V}, I_C = 100 \mu\text{A}$ |      |     | 0.4  | V             |
| Input resistance                             | $R_1$         |  | -30% | 10  | +30% | k $\Omega$    |

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

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