UNR32A7

Silicon NPN epitaxial planar transistor

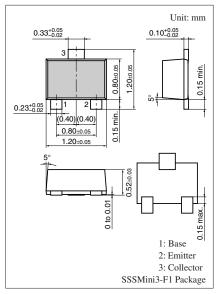
For digital circuits

■ Features

- Suitable for high-density mounting and downsizing of the equipment
- Contribute to low power consumption

■ Absolute Maximum Ratings $T_a = 25$ °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 | 80 | mA | |
| Total power dissipation | P _T | 100 | mW | |
| Junction temperature | T_{j} | 125 | °C | |
| Storage temperature | T_{stg} | -55 to +125 | °C | |



Marking Symbol: HE

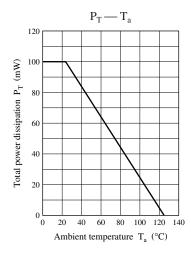
Internal Connection

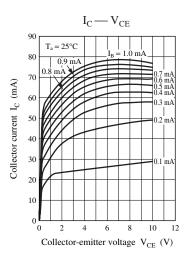
$$R_1 (22 k\Omega)$$
 C
 C
 C
 C

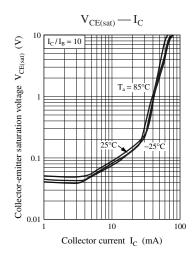
■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

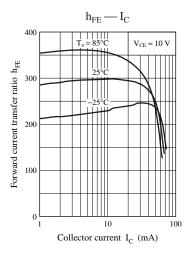
| Parameter | Symbol | Conditions | Min | Тур | Max | Unit |
|--|----------------------|--|------|-----|------|------|
| Collector-base voltage (Emitter open) | V _{CBO} | $I_C = 10 \ \mu A, I_E = 0$ | 50 | | | V |
| Collector-emitter voltage (Base open) | V _{CEO} | $I_C = 2 \text{ mA}, I_B = 0$ | 50 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 50 \text{ V}, I_E = 0$ | | | 0.1 | μΑ |
| Collector-emitter cutoff current (Base open) | I_{CEO} | $V_{CE} = 50 \text{ V}, I_{B} = 0$ | | | 0.5 | μΑ |
| 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)} | $I_C = 10 \text{ mA}, I_B = 0.3 \text{ mA}$ | | | 0.25 | V |
| Output voltage high level | V _{OH} | $V_{CC} = 5 \text{ V}, V_B = 0.5 \text{ V}, R_L = 1 \text{ k}\Omega$ | 4.9 | | | V |
| Output voltage low level | V _{OL} | $V_{CC} = 5 \text{ V}, V_B = 2.5 \text{ V}, R_L = 1 \text{ k}\Omega$ | | | 0.2 | V |
| Input resistance | R ₁ | | -30% | 22 | +30% | kΩ |
| Transition frequency | f_T | $V_{CB} = 10 \text{ V}, I_E = -2 \text{ mA}, f = 200 \text{ MHz}$ | | 150 | | MHz |

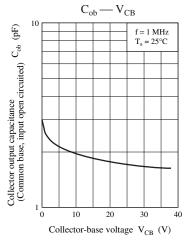
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

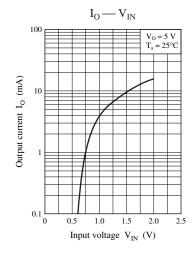


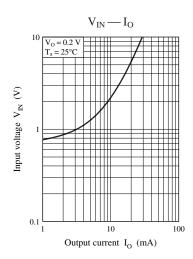












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