UNR32AT

Silicon NPN epitaxial planar type

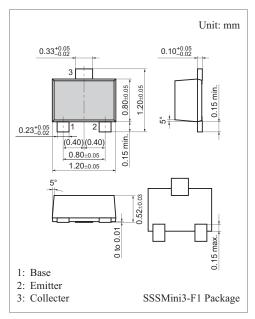
For digital circuits

■ Features

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

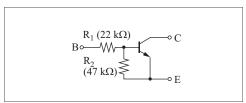
■ Absolute Maximum Ratings $T_a = 25$ °C

| 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: KZ

Internal Connection



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

| Parameter | Symbol | Conditions | Min | Тур | Max | Unit |
|--|----------------------|--|------|------|------|------|
| Collector-base voltage (Emitter open) | V _{CBO} | $I_{\rm C} = 10 \mu A, I_{\rm E} = 0$ | 50 | | | V |
| Collector-emitter voltage (Base open) | V _{CEO} | $I_{\rm CI} = 2 \text{ mA}, I_{\rm B} = 0$ | 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} | $V_{CH} = 50 \text{ V}, I_B = 0$ | | | 0.5 | μΑ |
| Emitter-base cutoff current (Collector open) | I _{EBO} | $V_{EB} = 6 \text{ V}, I_{C} = 0$ | | | 0.2 | mA |
| Forward current transfer ratio | h _{FE} | $V_{CH} = 10 \text{ V}, I_{C} = 5 \text{ mA}$ | 80 | | 400 | _ |
| Collector-emitter saturation voltage | V _{CE(sat)} | $I_{CI} = 10 \text{ mA}, I_{B} = 0.3 \text{ mA}$ | | | 0.25 | V |
| Output voltage high-level | V _{OH} | $V_{CCI} = 5 \text{ V}, V_B = 0.5 \text{ V}, R_{LI} = 1 \text{ k}\Omega$ | 4.9 | | | V |
| Output voltage low-level | V _{OL} | $V_{CCI} = 5 \text{ V}, V_B = 2.5 \text{ V}, R_{LI} = 1 \text{ k}\Omega$ | | | 0.2 | V |
| Input resistance | R_1 | | -30% | 22 | +30% | kΩ |
| Resistance ratio | R_1/R_2 | | 0.37 | 0.47 | 0.57 | _ |
| 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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