
2SA1350

Silicon PNP Epitaxial

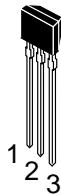
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Application

- Low frequency low noise amplifier
- HF amplifier

Outline

SPAK



1. Emitter
2. Collector
3. Base

2SA1350

Absolute Maximum Ratings (Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|-----------|-------------|------|
| Collector to base voltage | V_{CBO} | -40 | V |
| Collector to emitter voltage | V_{CEO} | -30 | V |
| Emitter to base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -100 | mA |
| Collector power dissipation | P_C | 300 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

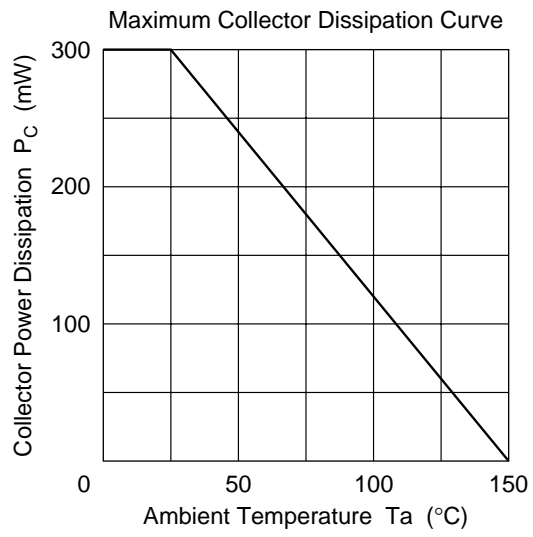
Electrical Characteristics (Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|-----|-----|-------|---------|--|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | -40 | — | — | V | $I_C = -10 \mu A, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | -30 | — | — | V | $I_C = -1 \text{ mA}, R_{BE} = \infty$ |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | -5 | — | — | V | $I_E = -10 \mu A, I_C = 0$ |
| Collector cutoff current | I_{CBO} | — | — | -0.5 | μA | $V_{CB} = -18 \text{ V}, I_E = 0$ |
| Emitter cutoff current | I_{EBO} | — | — | -0.5 | μA | $V_{EB} = -2 \text{ V}, I_C = 0$ |
| DC current transfer ratio | h_{FE}^{*1} | 100 | — | 500 | | $V_{CE} = -12 \text{ V}, I_C = -2 \text{ mA}$ |
| Base to emitter voltage | V_{BE} | — | — | -0.75 | V | $V_{CE} = -12 \text{ V}, I_C = -2 \text{ mA}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | -0.2 | V | $I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$ |
| Gain bandwidth product | f_T | — | 200 | — | MHz | $V_{CE} = -12 \text{ V}, I_C = -2 \text{ mA}$ |
| Collector output capacitance | C_{ob} | — | — | 4.5 | pF | $V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ |
| Noise figure | NF | — | 1.0 | 5.0 | dB | $V_{CE} = -6 \text{ V}, I_C = -0.1 \text{ mA}$ $R_g = 1 \text{ k}\Omega, f = 1 \text{ kHz}$ |

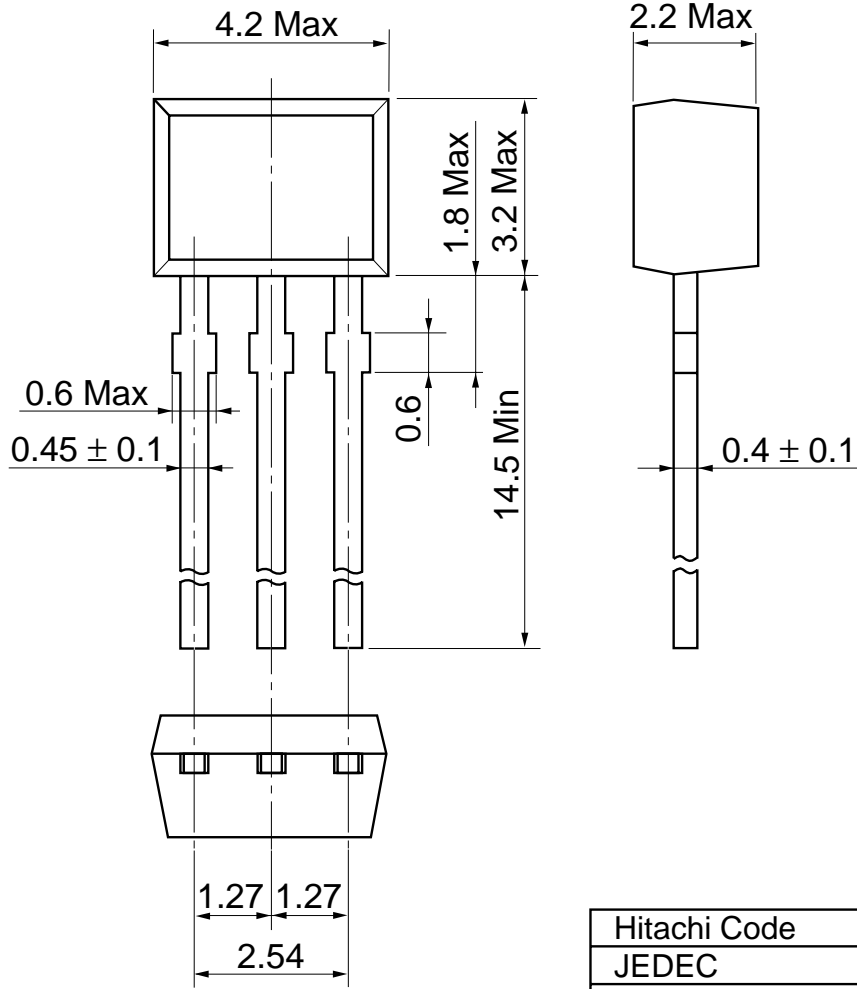
Note: 1. The 2SA1350 is grouped by h_{FE} as follows.

| B | C | D |
|------------|------------|------------|
| 100 to 200 | 160 to 320 | 250 to 500 |

See characteristic curves of 2SA1031.



Unit: mm



| | |
|--------------------------|--------|
| Hitachi Code | SPAK |
| JEDEC | — |
| EIAJ | — |
| Weight (reference value) | 0.10 g |

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