2SA1390

Silicon PNP Epitaxial

HITACHI

ADE-208-1017 (Z) 1st. Edition Mar. 2001

Application

Low frequency amplifier

Outline

SPAK



- 1. Emitter
- 2. Collector
- 3. Base



2SA1390

Absolute Maximum Ratings (Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|------------------|-------------|------|
| Collector to base voltage | V_{CBO} | -35 | V |
| Collector to emitter voltage | V _{CEO} | – 35 | V |
| Emitter to base voltage | V_{EBO} | -4 | V |
| Collector current | I _c | -500 | mA |
| Collector power dissipation | P _c | 300 | mW |
| Junction temperature | Tj | 150 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |

Electrical Characteristics ($Ta = 25^{\circ}C$)

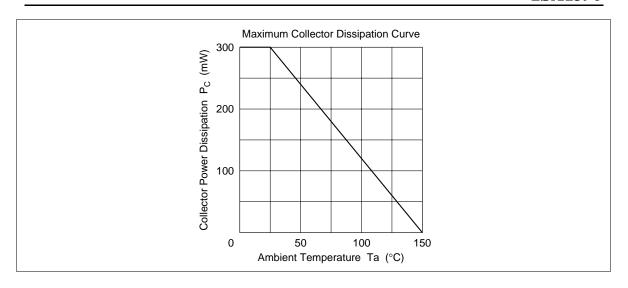
| Item | Symbol | Min | Тур | Max | Unit | Test conditions |
|---|---------------------|-----|-------|------|------|--|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | -35 | _ | _ | V | $I_{c} = -10 \ \mu A, \ I_{E} = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | -35 | _ | _ | V | $I_{C} = -1 \text{ mA}, R_{BE} = \infty$ |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | -4 | _ | _ | V | $I_{E} = -10 \ \mu A, \ I_{C} = 0$ |
| Collector cutoff current | I_{CBO} | _ | _ | -0.5 | μΑ | $V_{CB} = -20 \text{ V}, I_{E} = 0$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | _ | -0.2 | -0.6 | V | $I_{\rm C} = -150 \text{ mA}, I_{\rm B} = -15 \text{ mA}^{*2}$ |
| DC current transfer ratio | h _{FE1} *1 | 60 | _ | 320 | | $V_{CE} = -3 \text{ V}, I_{C} = -10 \text{ mA}$ |
| DC current transfer ratio | h _{FE2} | 10 | _ | _ | | $V_{CE} = -3 \text{ V}, I_{C} = -500 \text{ mA}^{*2}$ |
| Base to emitter voltage | V_{BE} | _ | -0.64 | _ | V | $V_{CE} = -3 \text{ V}, I_{C} = -10 \text{ mA}$ |

Notes: 1. The 2SA1390 is grouped by h_{FE1} as follows.

2. Pulse test

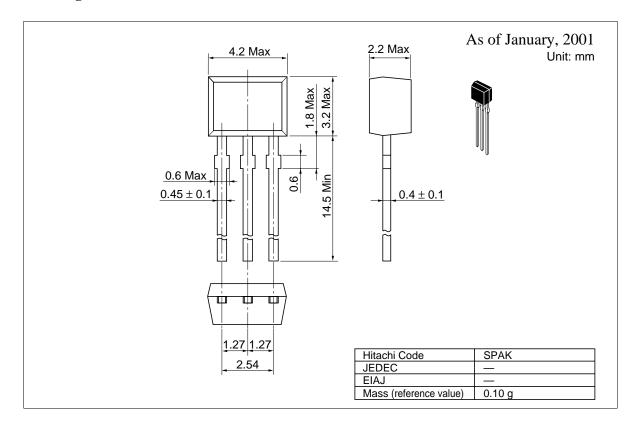
| В | С | D |
|-----------|------------|------------|
| 60 to 120 | 100 to 200 | 160 to 320 |

See characteristic curves of 2SA673.



2SA1390

Package Dimensions



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