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# 2SA1468

Silicon PNP Epitaxial

# HITACHI

ADE-208-1018 (Z)  
1st. Edition  
Mar. 2001

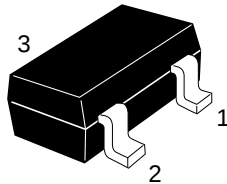
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## Application

High voltage amplifier

## Outline

MPAK



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

Absolute Maximum Ratings (Ta = 25°C)

| Item                         | Symbol    | Ratings     | Unit |
|------------------------------|-----------|-------------|------|
| Collector to base voltage    | $V_{CBO}$ | -180        | V    |
| Collector to emitter voltage | $V_{CEO}$ | -180        | V    |
| Emitter to base voltage      | $V_{EBO}$ | -5          | V    |
| Collector current            | $I_C$     | -100        | mA   |
| Collector power dissipation  | $P_C$     | 150         | mW   |
| Junction temperature         | $T_j$     | 150         | °C   |
| Storage temperature          | $T_{stg}$ | -55 to +150 | °C   |

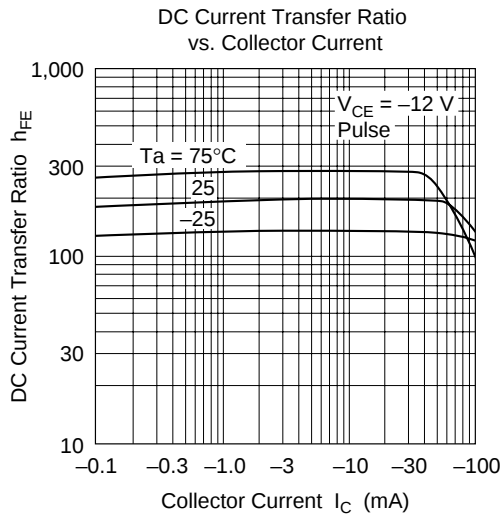
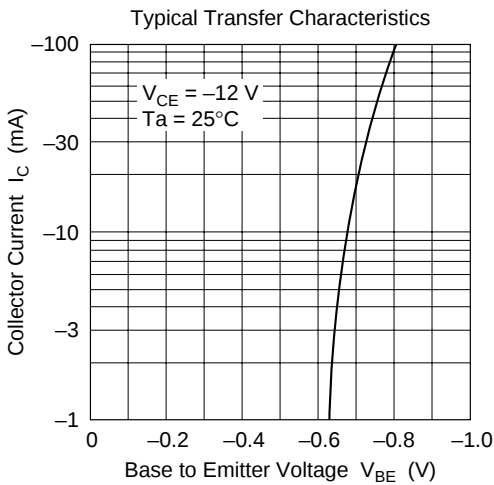
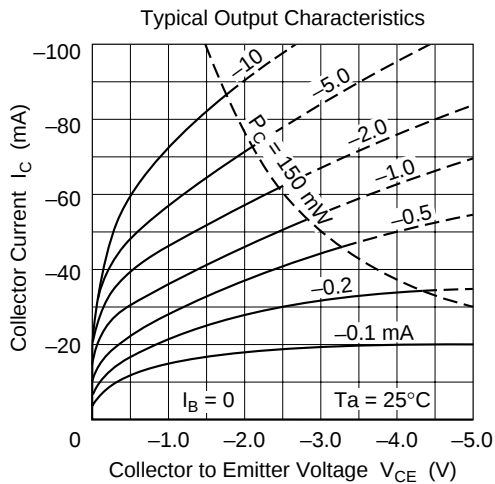
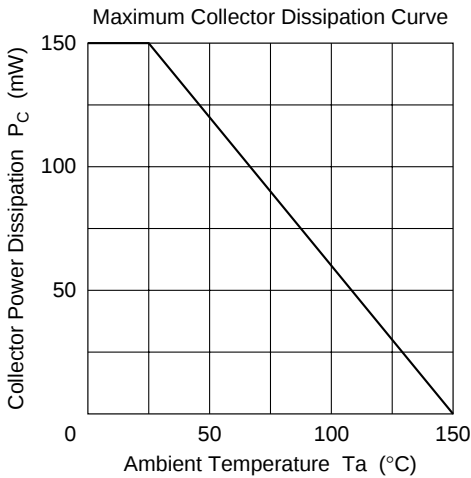
Electrical Characteristics (Ta = 25°C)

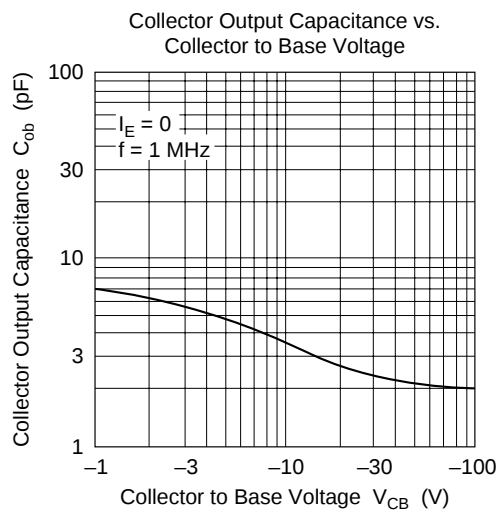
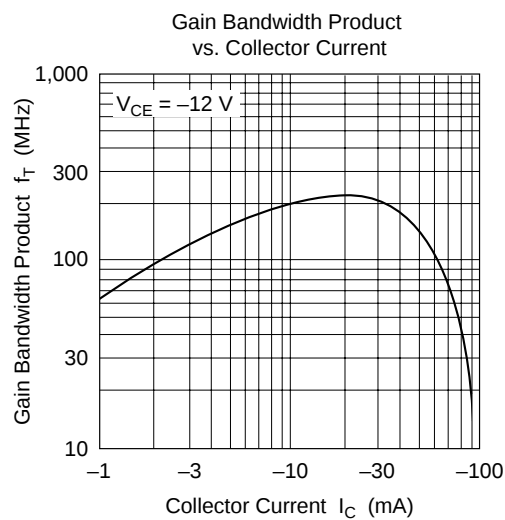
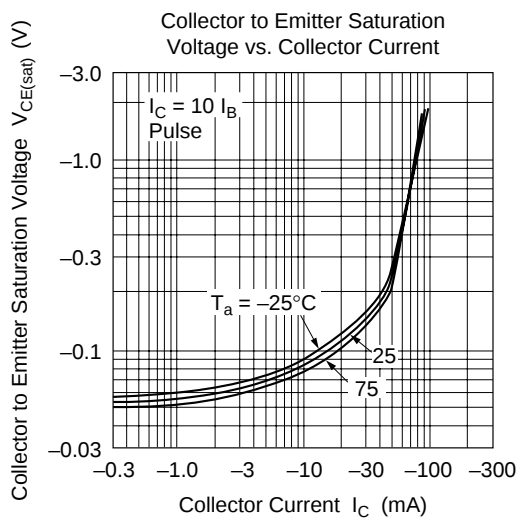
| Item                                    | Symbol        | Min  | Typ | Max  | Unit | Test conditions                                          |
|-----------------------------------------|---------------|------|-----|------|------|----------------------------------------------------------|
| Collector to base breakdown voltage     | $V_{(BR)CBO}$ | -180 | —   | —    | V    | $I_C = -10\text{ }\mu\text{A}$ , $I_E = 0$               |
| Collector to emitter breakdown voltage  | $V_{(BR)CEO}$ | -180 | —   | —    | V    | $I_C = -0.5\text{ mA}$ , $R_{BE} = \infty$               |
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$ | -5   | —   | —    | V    | $I_E = -10\text{ }\mu\text{A}$ , $I_C = 0$               |
| DC current transfer ratio               | $h_{FE}^{*1}$ | 100  | —   | 320  |      | $V_{CE} = -12\text{ V}$ , $I_C = -2\text{ mA}^{*2}$      |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | —    | —   | -0.5 | V    | $I_C = -30\text{ mA}$ , $I_B = -3\text{ mA}^{*2}$        |
| Base to emitter voltage                 | $V_{BE}$      | —    | —   | -1.0 | V    | $V_{CE} = -12\text{ V}$ , $I_C = -2\text{ mA}$           |
| Gain bandwidth product                  | $f_T$         | —    | 200 | —    | MHz  | $V_{CE} = -12\text{ V}$ , $I_C = -10\text{ mA}$          |
| Collector output capacitance            | $C_{ob}$      | —    | 3.5 | —    | pF   | $V_{CB} = -10\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$ |

Notes: 1. The 2SA1468 is grouped by  $h_{FE}$  as follows.

2. Pulse test

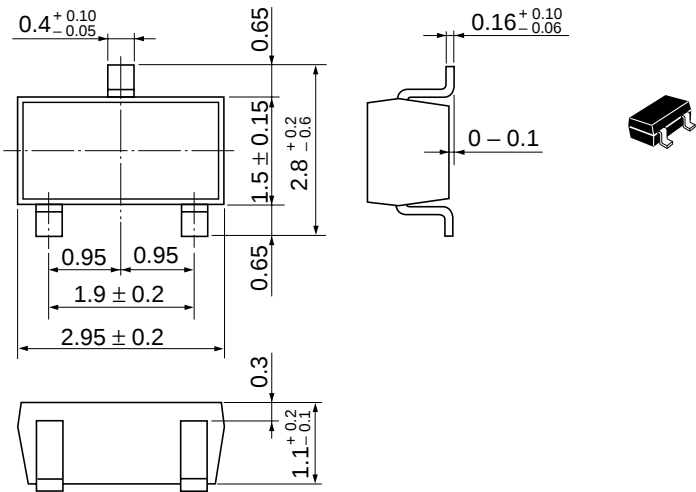
| Grade    | B          | C          |
|----------|------------|------------|
| Mark     | INB        | INC        |
| $h_{FE}$ | 100 to 200 | 160 to 320 |





Package Dimensions

As of January, 2001  
Unit: mm



|                        |          |
|------------------------|----------|
| Hitachi Code           | MPAK     |
| JEDEC                  | —        |
| EIAJ                   | Conforms |
| Mass (reference value) | 0.011 g  |

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