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# 2SC4366

Silicon NPN Epitaxial

# HITACHI

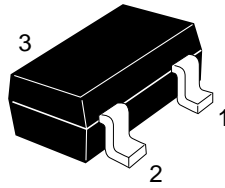
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## Application

Low Frequency amplifier

## Outline

MPAK



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

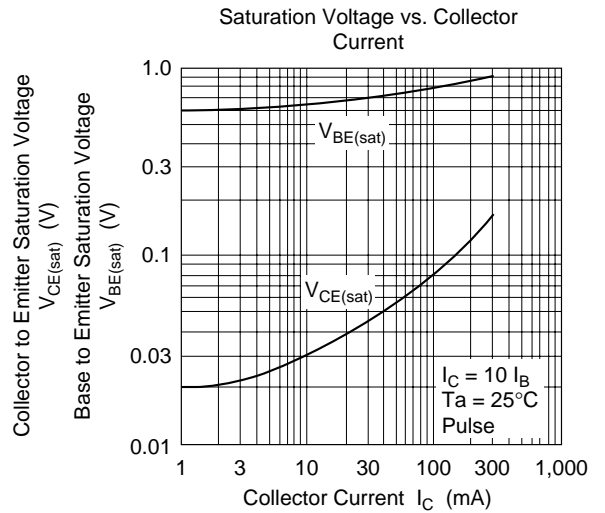
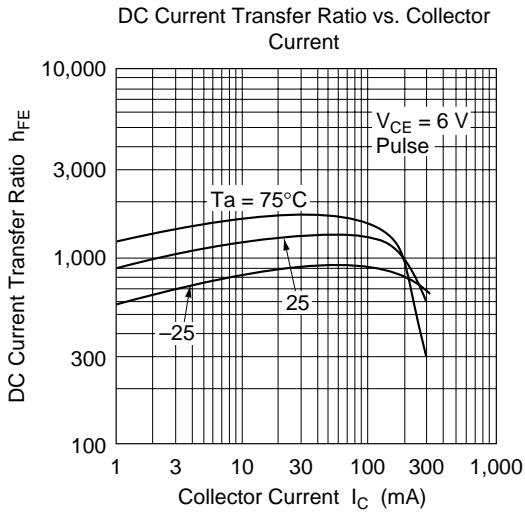
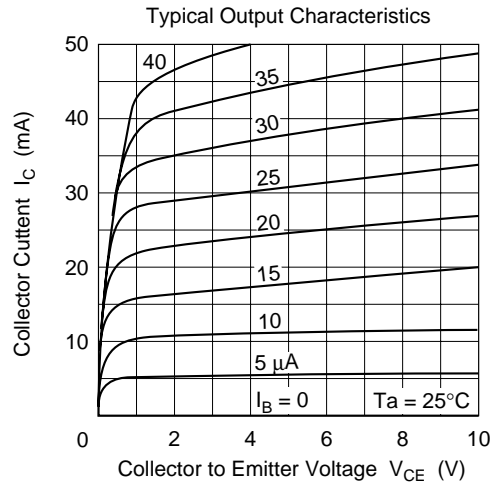
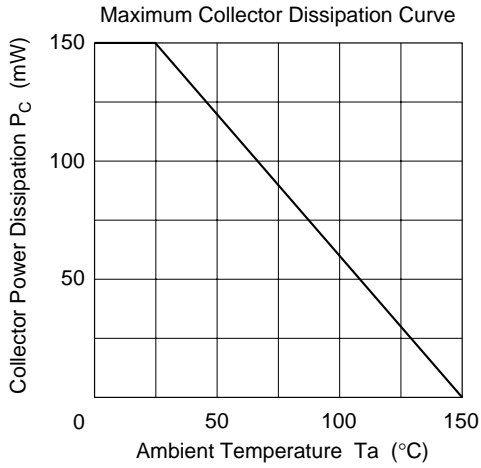
**Absolute Maximum Ratings** ( $T_a = 25^\circ\text{C}$ )

| Item                         | Symbol           | Ratings     | Unit             |
|------------------------------|------------------|-------------|------------------|
| Collector to base voltage    | $V_{\text{CBO}}$ | 60          | V                |
| Collector to emitter voltage | $V_{\text{CEO}}$ | 50          | V                |
| Emitter to base voltage      | $V_{\text{EBO}}$ | 15          | V                |
| Collector current            | $I_{\text{C}}$   | 300         | mA               |
| Collector power dissipation  | $P_{\text{C}}$   | 150         | mW               |
| Junction temperature         | $T_{\text{j}}$   | 150         | $^\circ\text{C}$ |
| Storage temperature          | $T_{\text{stg}}$ | -55 to +150 | $^\circ\text{C}$ |

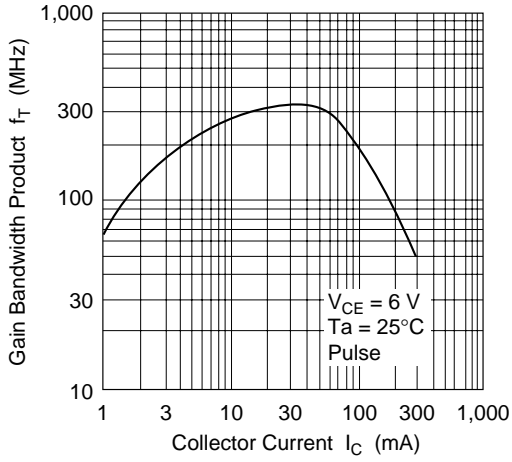
**Electrical Characteristics** ( $T_a = 25^\circ\text{C}$ )

| Item                                    | Symbol                      | Min | Typ | Max  | Unit          | Test conditions   |
|---|-----------------------------|-----|-----|------|---------------|---|
| Collector to base breakdown voltage     | $V_{(\text{BR})\text{CBO}}$ | 60  | —   | —    | V             | $I_{\text{C}} = 10 \mu\text{A}$ , $I_{\text{E}} = 0$                        |
| Collector to emitter breakdown voltage  | $V_{(\text{BR})\text{CEO}}$ | 50  | —   | —    | V             | $I_{\text{C}} = 1 \text{ mA}$ , $R_{\text{BE}} = \infty$                    |
| Emitter to base breakdown voltage       | $V_{(\text{BR})\text{EBO}}$ | 15  | —   | —    | V             | $I_{\text{E}} = 10 \mu\text{A}$ , $I_{\text{C}} = 0$                        |
| Collector cutoff current                | $I_{\text{CBO}}$            | —   | —   | 1    | $\mu\text{A}$ | $V_{\text{CB}} = 50 \text{ V}$ , $I_{\text{E}} = 0$                         |
| Base to emitter voltage                 | $V_{\text{BE}}$             | —   | —   | 0.75 | V             | $V_{\text{CE}} = 6 \text{ V}$ , $I_{\text{C}} = 1 \text{ mA}$               |
| DC current transfer ratio               | $h_{\text{FE1}}$            | 800 | —   | 2000 |               | $V_{\text{CE}} = 6 \text{ V}$ , $I_{\text{C}} = 100 \text{ mA}$<br>(pulse)  |
|   | $h_{\text{FE2}}$            | 500 | —   | —    |               | $V_{\text{CE}} = 6 \text{ V}$ , $I_{\text{C}} = 1 \text{ mA}$               |
| Collector to emitter saturation voltage | $V_{\text{CE}(\text{sat})}$ | —   | —   | 0.3  | V             | $I_{\text{C}} = 300 \text{ mA}$ , $I_{\text{B}} = 30 \text{ mA}$<br>(pulse) |

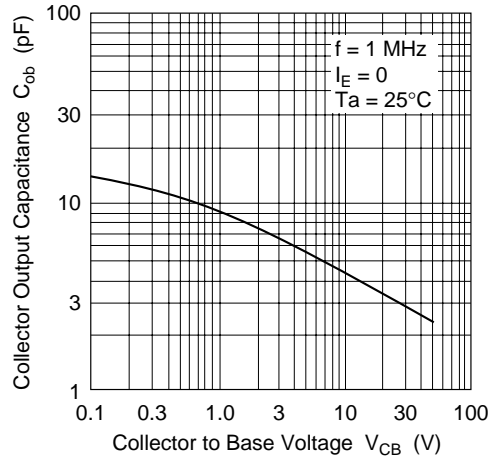
Note: Marking is "Z1-".

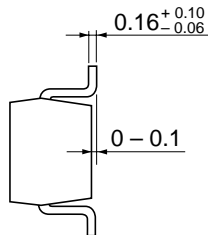
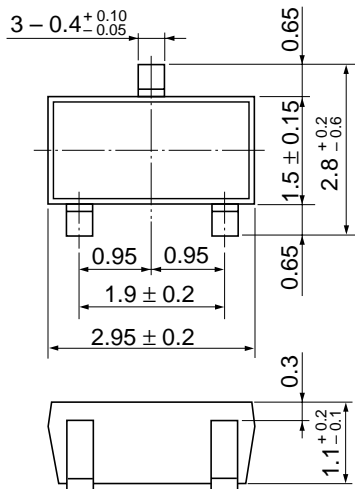


Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage





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

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