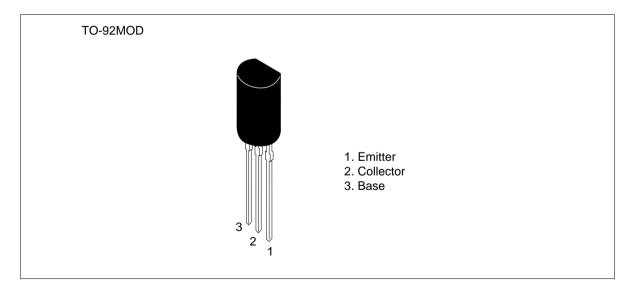
# Silicon NPN Triple Diffused

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#### Application

- High frequency high voltage amplifier
- Video output

#### Outline



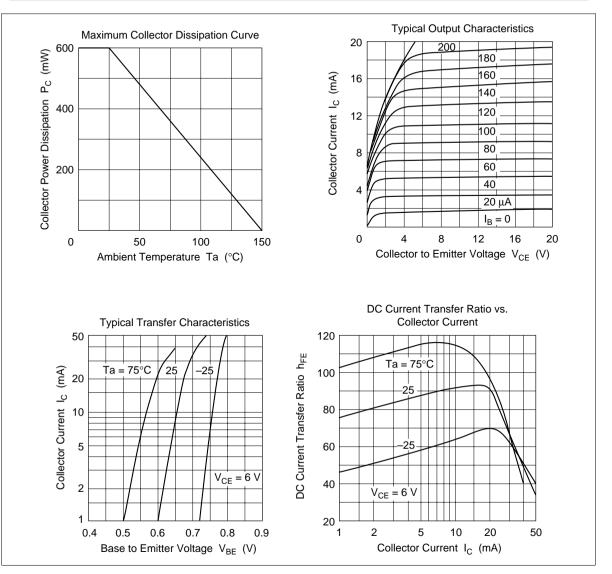


## **Absolute Maximum Ratings** (Ta = $25^{\circ}$ C)

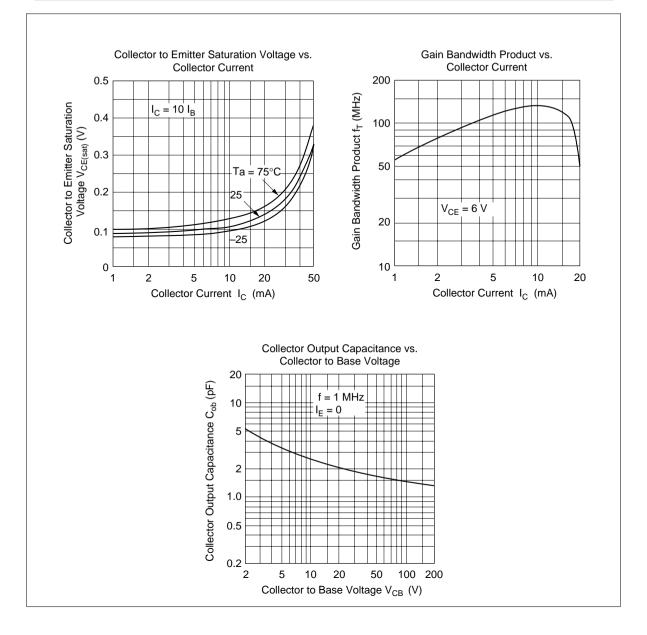
| Item                         | Symbol           | Ratings     | Unit |
|------------------------------|------------------|-------------|------|
| Collector to base voltage    | V <sub>CBO</sub> | 250         | V    |
| Collector to emitter voltage | V <sub>CEO</sub> | 200         | V    |
| Emitter to base voltage      | V <sub>EBO</sub> | 5           | V    |
| Collector current            | Ι <sub>c</sub>   | 50          | mA   |
| Collector power dissipation  | Pc               | 600         | mW   |
| Junction temperature         | Тј               | 150         | °C   |
| Storage temperature          | Tstg             | -55 to +150 | °C   |

## **Electrical Characteristics** (Ta = 25°C)

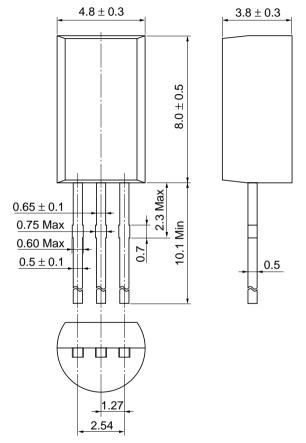
| Item                                    | Symbol                      | Min | Тур | Max | Unit | Test conditions  |
|---|-----------------------------|-----|-----|-----|------|--|
| Collector to base breakdown voltage     | $V_{\rm (BR)CBO}$           | 250 | _   | _   | V    | $I_{c} = 10 \ \mu A, \ I_{E} = 0$  |
| Collector to emitter breakdown voltage  | $V_{\rm (BR)CEO}$           | 200 | _   | _   | V    | $I_c = 1 \text{ mA}, R_{BE} = \infty$                                      |
| Emitter to base breakdown voltage       | $V_{(\text{BR})\text{EBO}}$ | 5   | —   | —   | V    | $I_{\rm E} = 10 \ \mu A, \ I_{\rm C} = 0$                                  |
| Collector cutoff current                | I <sub>CEO</sub>            | _   | —   | 1.0 | μΑ   | $V_{ce}$ = 120 V, $R_{be}$ = $\infty$                                      |
| DC current transfer ratio               | $h_{\text{FE}}$             | 30  | —   | 300 |      | $V_{ce} = 6 \text{ V}, \text{ I}_{c} = 10 \text{ mA}$                      |
| Collector to emitter saturation voltage | $V_{\text{CE(sat)}}$        | —   | —   | 1.0 | V    | $I_{c} = 10 \text{ mA}, I_{B} = 1 \text{ mA}$                              |
| Gain bandwidth product                  | f <sub>T</sub>              | 60  | 130 | _   | MHz  | $V_{ce} = 6 \text{ V}, \text{ I}_{c} = 10 \text{ mA}$                      |
| Collector output capacitance            | Cob                         |     | 3   | 4   | pF   | $V_{_{CB}} = 6 \text{ V}, \text{ I}_{_{E}} = 0, \text{ f} = 1 \text{ MHz}$ |



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#### Unit: mm



| Hitachi Code             | TO-92 Mod |
|--------------------------|-----------|
| JEDEC                    | _         |
| EIAJ                     | Conforms  |
| Weight (reference value) | 0.35 g    |

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