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# 2SC5250

Silicon NPN Triple Diffused Planar

## HITACHI

Preliminary

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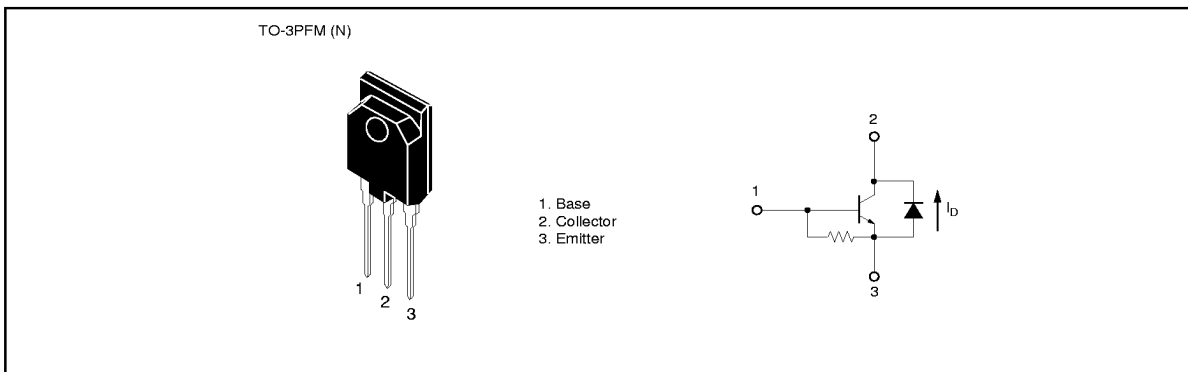
### Application

Character display horizontal deflection output

### Features

- High breakdown voltage  
 $V_{CBO} = 1500 \text{ V}$
- High speed switching  
 $t_f = 0.2 \mu\text{sec (typ)}$
- Built-in damper diode type
- Isolated package  
TO-3P•FM (N)

### Outline



## 2SC5250

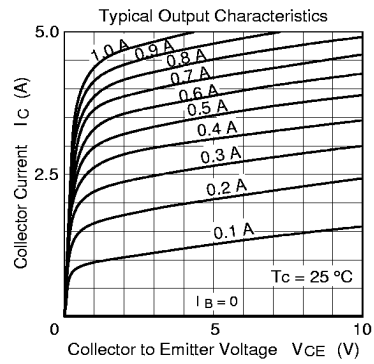
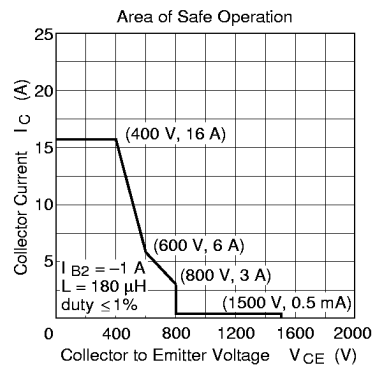
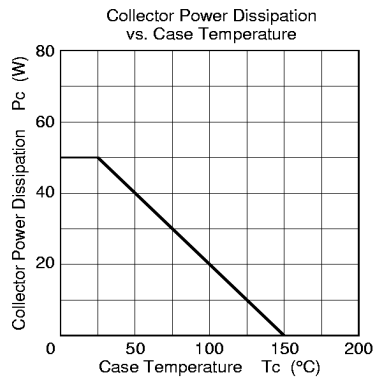
### Absolute Maximum Ratings (Ta = 25°C)

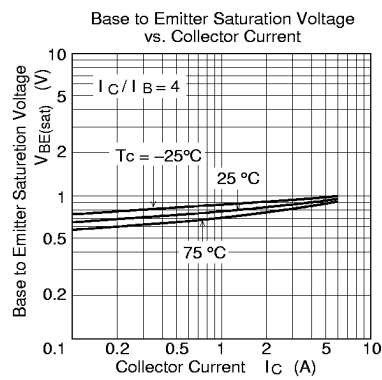
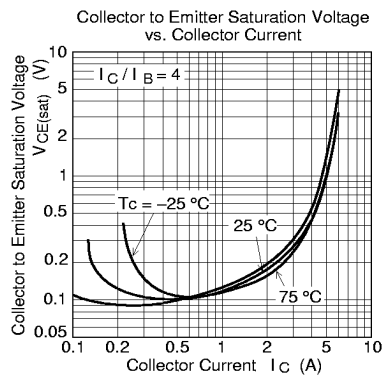
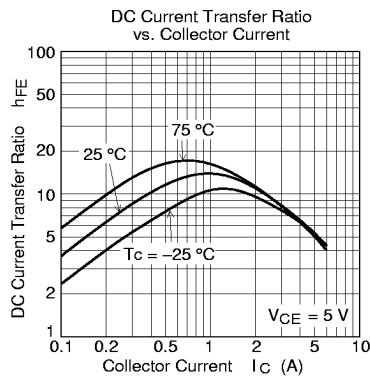
| Item                         | Symbol        | Ratings     | Unit |
|------------------------------|---------------|-------------|------|
| Collector to emitter voltage | $V_{CES}$     | 1500        | V    |
| Emitter to base voltage      | $V_{EBO}$     | 6           | V    |
| Collector current            | $I_C$         | 8           | A    |
| Collector peak current       | $I_{C(peak)}$ | 16          | A    |
| Collector power dissipation  | $P_C^{*1}$    | 50          | W    |
| Junction temperature         | Tj            | 150         | °C   |
| Storage temperature          | Tstg          | -55 to +150 | °C   |
| Diode current                | $I_D$         | 8           | A    |

Note: 1. Value at  $T_C = 25^\circ\text{C}$

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

| Item                                    | Symbol        | Min | Typ | Max | Unit            | Test conditions  |
|---|---------------|-----|-----|-----|-----------------|--|
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$ | 6   | —   | —   | V               | $I_E = 400\text{ mA}, I_C = 0$   |
| Collector cutoff current                | $I_{CES}$     | —   | —   | 500 | $\mu\text{A}$   | $V_{CE} = 1500\text{ V}, R_{BE} = 0$                                   |
| DC current transfer ratio               | $h_{FE1}$     | 6   | —   | 25  |                 | $V_{CE} = 5\text{ V}, I_C = 1\text{ A}$                                |
| DC current transfer ratio               | $h_{FE2}$     | 4   | —   | 7   |                 | $V_{CE} = 5\text{ V}, I_C = 5\text{ A}$                                |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | —   | —   | 5   | V               | $I_C = 5\text{ A}, I_B = 1.25\text{ A}$                                |
| Base to emitter saturation voltage      | $V_{BE(sat)}$ | —   | —   | 1.5 | V               | $I_C = 5\text{ A}, I_B = 1.25\text{ A}$                                |
| Forward voltage of damper diode         | $V_{ECF}$     | —   | —   | 2   | V               | $I_F = 8\text{ A}$   |
| Fall time                               | $t_f$         | —   | 0.2 | 0.4 | $\mu\text{sec}$ | $I_{CP} = 5\text{ A}, I_{B1} = 1\text{ A},$<br>$f_H = 31.5\text{ kHz}$ |





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