

2SC5223

Silicon NPN triple diffusion planar type

For high-speed switching

Features

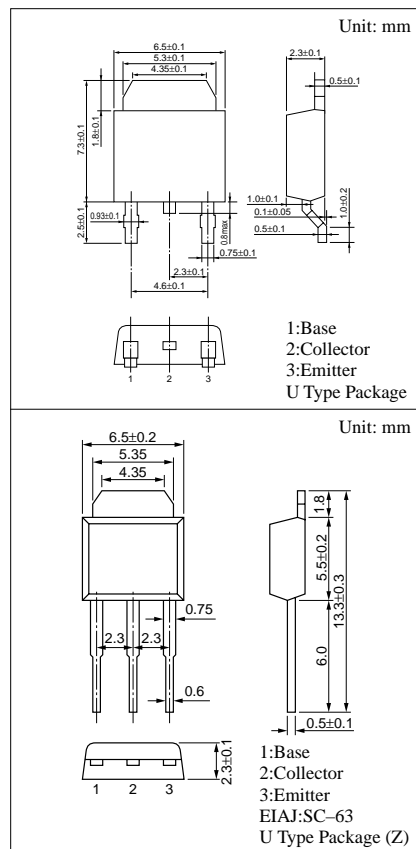
- High collector to base voltage V_{CBO}
- High collector to emitter V_{CEO}

Absolute Maximum Ratings (Ta=25°C)

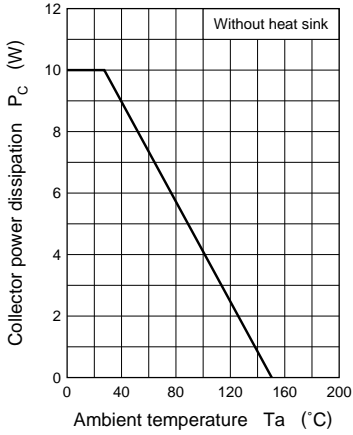
| Parameter | Symbol | Rated | Unit |
|---------------------------------------|-----------|-------------|------|
| Collector to base voltage | V_{CBO} | 500 | V |
| Collector to emitter voltage | V_{CEO} | 500 | V |
| Emitter to base voltage | V_{EBO} | 7 | V |
| Peak collector current | I_{CP} | 2.0 | A |
| Collector current | I_C | 1.0 | A |
| Collector power dissipation (Tc=25°C) | P_C | 10 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

Electrical Characteristics (Ta=25°C)

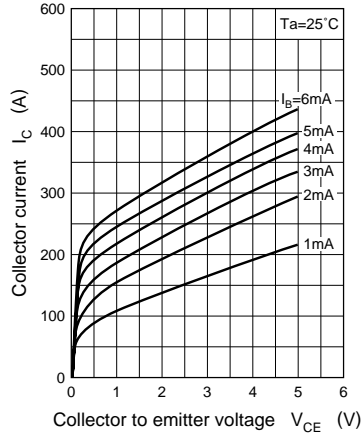
| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|---------------|----------------------------|-----|-----|-----|---------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 400V, I_E = 0$ | | | 100 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 5V, I_C = 0$ | | | 10 | μA |
| Collector to base voltage | V_{CBO} | $I_C = 100\mu A, I_E = 0$ | 500 | | | V |
| Collector to emitter voltage | V_{CEO} | $I_C = 1mA, I_B = 0$ | 500 | | | V |
| Emitter to base voltage | V_{EBO} | $I_E = 10\mu A, I_C = 0$ | 7 | | | V |
| Forward current transfer ratio | h_{FE1} | $V_{CE} = 5V, I_C = 50mA$ | 100 | | | |
| | h_{FE2} | $V_{CE} = 5V, I_C = 330mA$ | 100 | | | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 330mA, I_B = 33mA$ | | | 1.0 | V |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 330mA, I_B = 33mA$ | | | 1.5 | V |



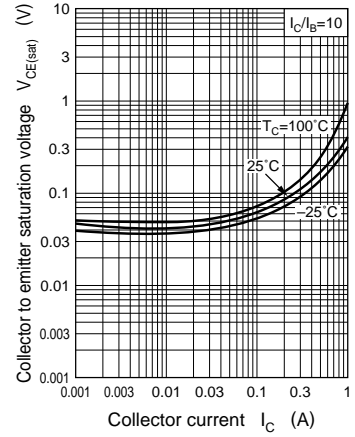
$P_C - T_a$



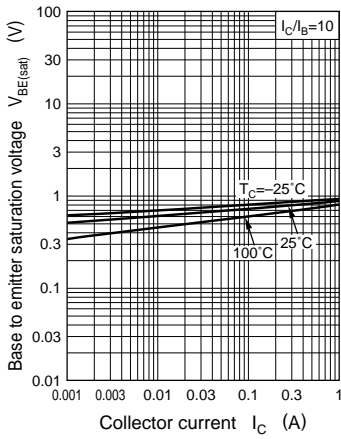
$I_C - V_{CE}$



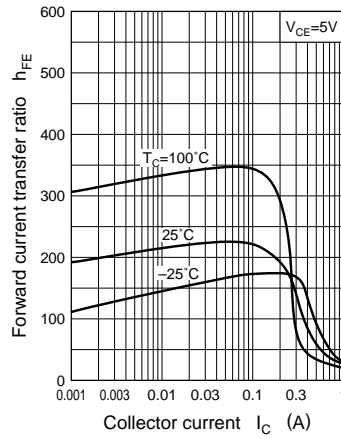
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

