

2SC5553

Silicon NPN triple diffusion mesa type

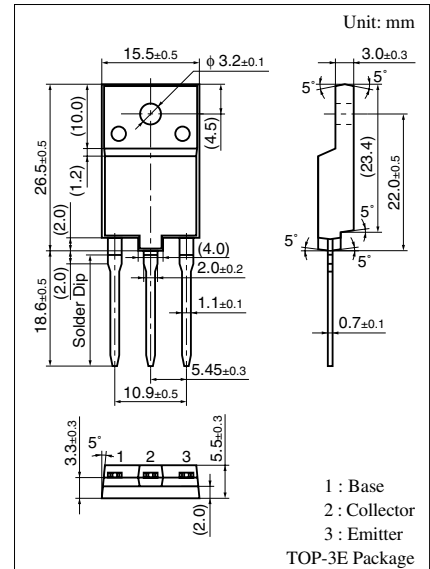
For horizontal deflection output

■ Features

- High breakdown voltage, and high reliability through the use of a glass passivation layer
- High-speed switching
- Wide area of safe operation (ASO)

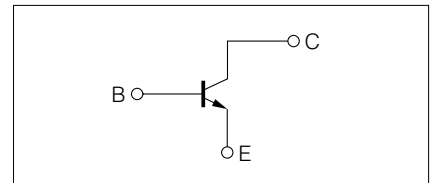
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit | |
|------------------------------|-----------|--------------------------|------------------|---|
| Collector to base voltage | V_{CBO} | 1 700 | V | |
| Collector to emitter voltage | V_{CES} | 1 700 | V | |
| | V_{CEO} | 600 | V | |
| Emitter to base voltage | V_{EBO} | 7 | V | |
| Peak collector current | I_{CP} | 30 | A | |
| Collector current | I_C | 22 | A | |
| Base current | I_B | 11 | A | |
| Collector power dissipation | P_C | $T_C = 25^\circ\text{C}$ | 70 | W |
| | | $T_a = 25^\circ\text{C}$ | 3.5 | |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ | |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ | |



Marking Symbol: C5553

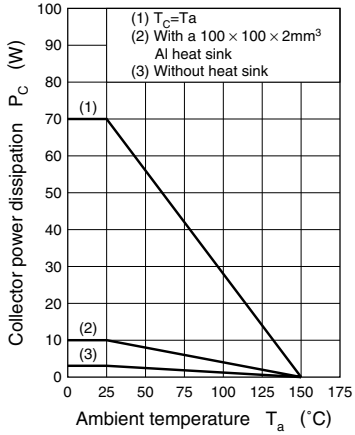
Internal Connection



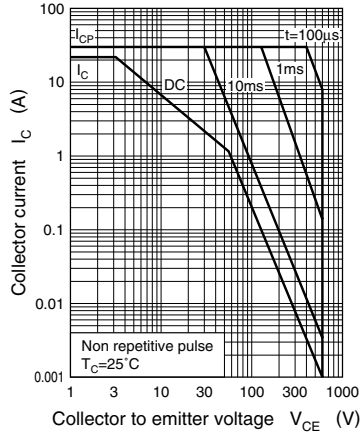
■ Electrical Characteristics $T_C = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|---|-----|-----|-----|---------------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 1\ 000\ \text{V}, I_E = 0$ | | | 50 | μA |
| | | $V_{CB} = 1\ 700\ \text{V}, I_E = 0$ | | | 1 | mA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 7\ \text{V}, I_C = 0$ | | | 50 | μA |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 5\ \text{V}, I_C = 11\ \text{A}$ | 6 | | 12 | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 11\ \text{A}, I_B = 2.75\ \text{A}$ | | | 3 | V |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 11\ \text{A}, I_B = 2.75\ \text{A}$ | | | 1.5 | V |
| Transition frequency | f_T | $V_{CE} = 10\ \text{V}, I_C = 0.1\ \text{A}, f = 0.5\ \text{MHz}$ | | 3 | | MHz |
| Storage time | t_{stg} | $I_C = 11\ \text{A}, \text{Resistance loaded}$ | | | 3.0 | μs |
| Fall time | t_f | $I_{B1} = 2.75\ \text{A}, I_{B2} = -5.5\ \text{A}$ | | | 0.2 | μs |

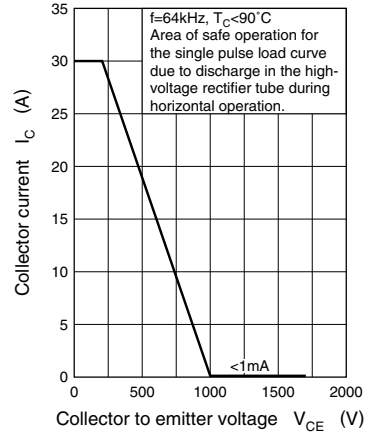
$P_C - T_a$



Area of safe operation (ASO)



Area of safe operation, horizontal operation ASO



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