

2SC5406, 2SC5406A

Silicon NPN triple diffusion mesa type

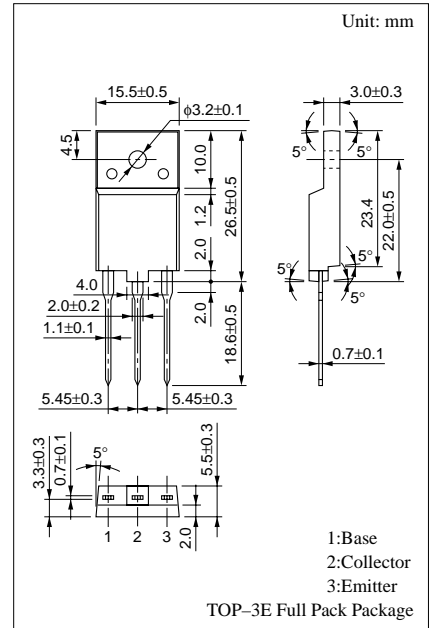
For horizontal deflection output

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 ($T_C=25^\circ\text{C}$)

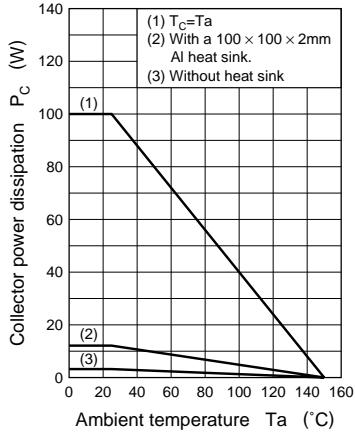
| Parameter | Symbol | Ratings | Unit | |
|------------------------------|-----------|------------------------|------------------|---|
| Collector to base voltage | V_{CBO} | 1500 | V | |
| Collector to emitter voltage | V_{CES} | 1500 | V | |
| | V_{CEO} | 600 | V | |
| Emitter to base voltage | V_{EBO} | 5 | V | |
| Peak collector current | I_{CP} | 20 | A | |
| Collector current | I_C | 14 | A | |
| Base current | I_B | 8 | A | |
| Collector power dissipation | P_C | $T_C=25^\circ\text{C}$ | 100 | W |
| | | $T_a=25^\circ\text{C}$ | 3 | |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ | |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ | |



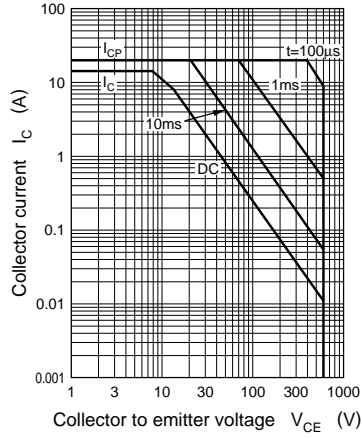
Electrical Characteristics ($T_C=25^\circ\text{C}$)

| Parameter | Symbol | Conditions | min | typ | max | Unit | |
|---|---------------|---|-----|-----|-----|---------------|---------------|
| Collector cutoff current | 2SC5406 | I_{CBO} | | | | 50 | μA |
| | 2SC5406A | | | | | 1 | mA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 5\text{V}, I_C = 0$ | | | 50 | μA | |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 5\text{V}, I_C = 7\text{A}$ | 5 | | 12 | | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 7\text{A}, I_B = 1.75\text{A}$ | | | 3 | V | |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 7\text{A}, I_B = 1.75\text{A}$ | | | 1.5 | V | |
| Transition frequency | f_T | $V_{CE} = 10\text{V}, I_C = 0, f = 0.5\text{MHz}$ | | 3 | | MHz | |
| Storage time | t_{stg} | $I_C = 7\text{A}, I_{B1} = 1.75\text{A}, I_{B2} = -3.5\text{A}$ | | | 4.0 | μs | |
| Fall time | t_f | | | | 0.3 | μs | |

$P_C - T_a$



Area of safe operation (ASO)



Area of safe operation, horizontal operation ASO

