

2SC5244, 2SC5244A

Silicon NPN triple diffusion mesa type

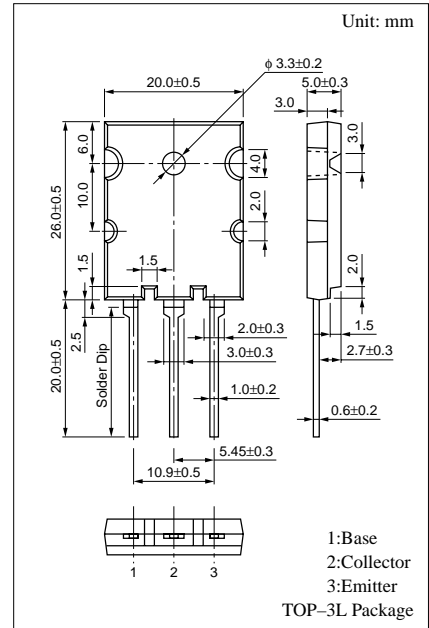
For horizontal deflection output

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

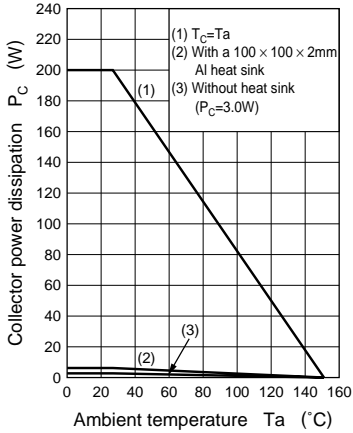
| Parameter | Symbol | Rated | Unit |
|--|------------------|-------------|------------------|
| Collector to base voltage | V_{CBO} | 1500 | V |
| 2SC5244A | | 1600 | |
| Collector to emitter voltage | V_{CES} | 1500 | V |
| 2SC5244A | | 1600 | |
| Emitter to base voltage | V_{EBO} | 6 | V |
| Peak collector current | I_{CP} | 20 | A |
| Collector current | I_{C} | 30 | A |
| Collector power dissipation | P_{C} | 200 | W |
| $T_C=25^\circ\text{C}$ $T_a=25^\circ\text{C}$ | | 3.5 | |
| Junction temperature | T_{j} | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |



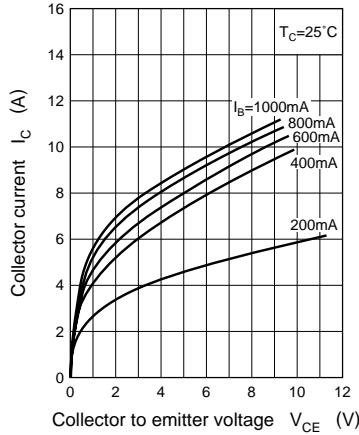
Electrical Characteristics ($T_C=25^\circ\text{C}$)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|----------------------|--|-----|------|-----|---------------|
| Collector cutoff current | I_{CBO} | $V_{\text{CB}} = 1500\text{V}, I_{\text{E}} = 0$ | | | 1 | mA |
| | | $V_{\text{CB}} = 1600\text{V}, I_{\text{E}} = 0$ | | | 1 | |
| Emitter cutoff current | I_{EBO} | $V_{\text{EB}} = 5\text{V}, I_{\text{C}} = 0$ | | | 50 | μA |
| Forward current transfer ratio | h_{FE} | $V_{\text{CE}} = 5\text{V}, I_{\text{C}} = 10\text{A}$ | 5 | | 12 | |
| Collector to emitter saturation voltage | $V_{\text{CE(sat)}}$ | $I_{\text{C}} = 10\text{A}, I_{\text{B}} = 2.8\text{A}$ | | | 3 | V |
| Base to emitter saturation voltage | $V_{\text{BE(sat)}}$ | $I_{\text{C}} = 10\text{A}, I_{\text{B}} = 2.8\text{A}$ | | | 1.5 | V |
| Transition frequency | f_{T} | $V_{\text{CE}} = 10\text{V}, I_{\text{C}} = 0.1\text{A}, f = 0.5\text{MHz}$ | | 3 | | MHz |
| Storage time | t_{stg} | $I_{\text{C}} = 12\text{A}, I_{\text{B1}} = 2.4\text{A}, I_{\text{B2}} = -4.8\text{A}$ | | 1.5 | 2.5 | μs |
| Fall time | | Resistance loaded | | 0.12 | 0.2 | |

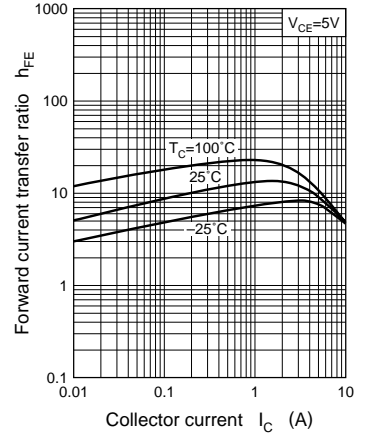
$P_C - T_a$



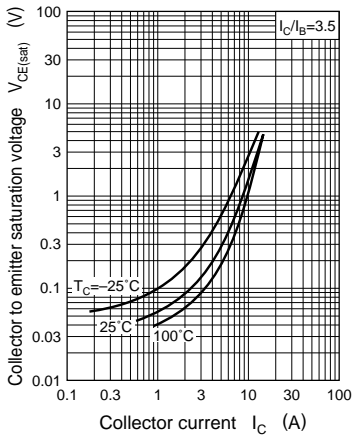
$I_C - V_{CE}$



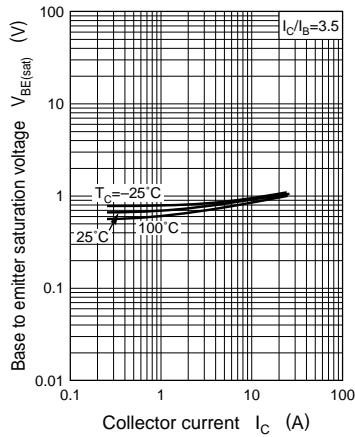
$h_{FE} - I_C$



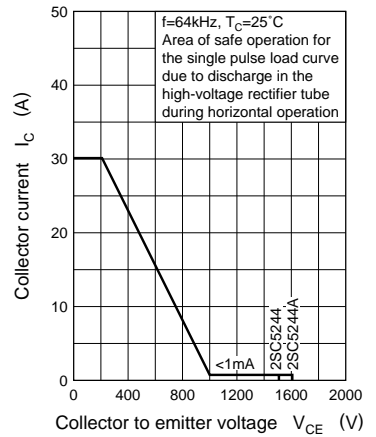
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



Area of safe operation, horizontal operation ASO



$R_{th(t)} - t$

