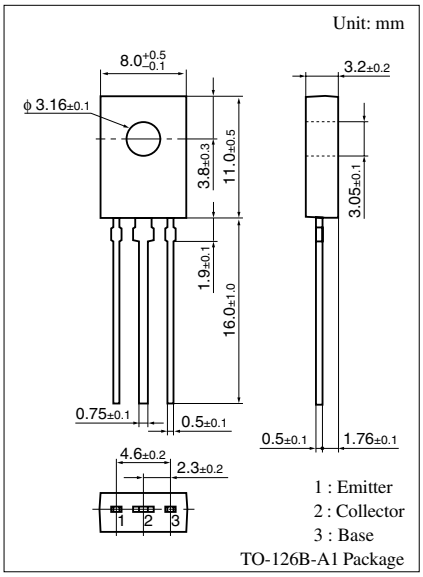
# 2SC3063

## Silicon NPN triple diffusion planar type

For TV video output amplification




### ■ Features

- High collector to emitter voltage $V_{CEO}$
- Small collector output capacitance $C_{ob}$
- TO-126B package which requires no insulation plate for installation to the heat sink

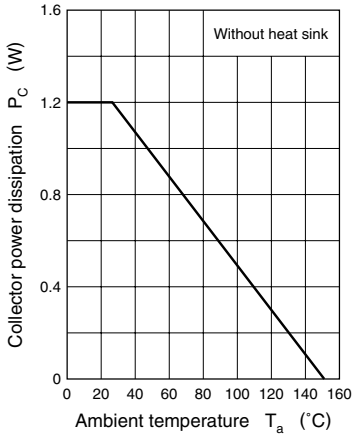
### ■ Absolute Maximum Ratings $T_C = 25°C$

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector to base voltage | $V_{CBO}$ | 300 | V |
| Collector to emitter voltage | $V_{CEO}$ | 300 | V |
| Emitter to base voltage | $V_{EBO}$ | 7 | V |
| Peak collector current | $I_{CP}$ | 200 | mA |
| Collector current | $I_C$ | 100 | mA |
| Collector power dissipation | $P_C$ | 1.2 | W |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature | $T_{stg}$ | −55 to +150 | °C |

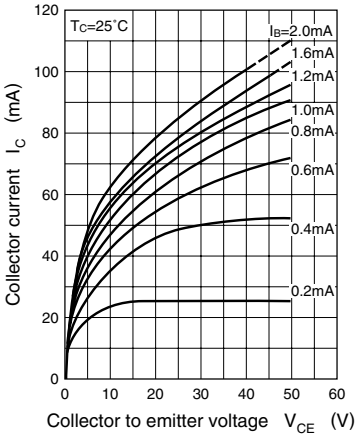
### ■ Electrical Characteristics $T_C = 25°C$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector to base voltage | $V_{CBO}$ | $I_C$ = 10 µA, $I_E$ = 0 | 300 | | | V |
| Collector to emitter voltage | $V_{CEO}$ | $I_C$ = 0.1 mA, $I_B$ = 0 | 300 | | | V |
| Emitter to base voltage | $V_{EBO}$ | $I_E$ = 10 µA, $I_C$ = 0 | 7 | | | V |
| Forward current transfer ratio | $h_{FE}$ | $V_{CE}$ = 50 V, $I_C$ = 5 mA | 50 | | 250 | |
| Base to emitter voltage | $V_{BE}$ | $V_{CE}$ = 10 V, $I_C$ = 30 mA | | | 1.2 | V |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C$ = 30 mA, $I_B$ = 3 mA | | | 1.5 | V |
| Transition frequency | $f_T$ | $V_{CB}$ = 30 V, $I_E$ = −20 mA, f = 200 MHz | 70 | 140 | | MHz |
| Collector output capacitance | $C_{ob}$ | $V_{CB}$ = 30 V, $I_E$ = 0, f = 1 MHz | | 2.4 | | pF |

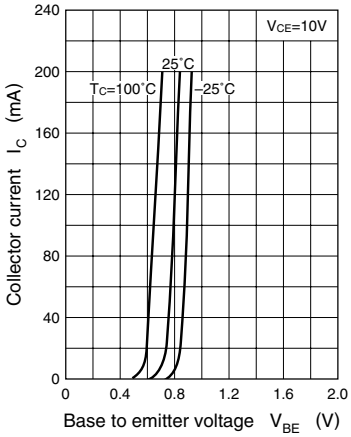
$P_C$ — $T_a$



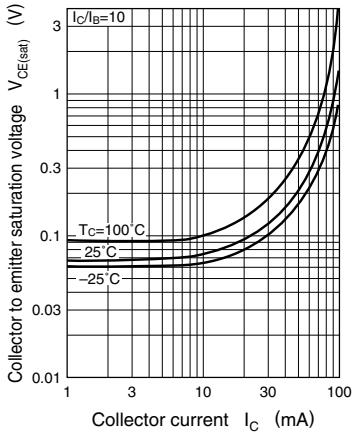

$I_C$ — $V_{CE}$



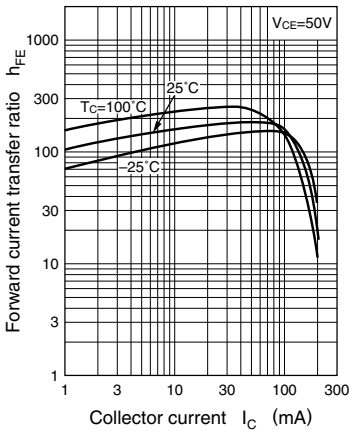

$I_C$ — $V_{BE}$



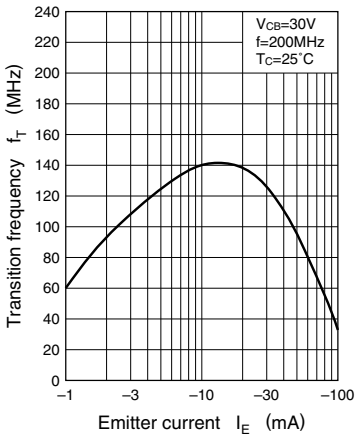

$V_{CE(sat)}$ — $I_C$



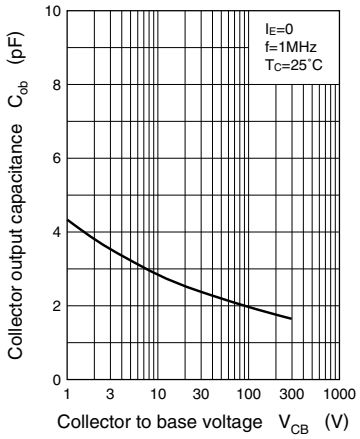

$h_{FE}$ — $I_C$



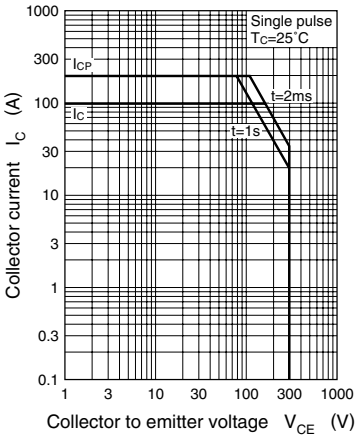

$f_T$ — $I_E$




$C_{ob}$ — $V_{CB}$




Area of safe operation (ASO)



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