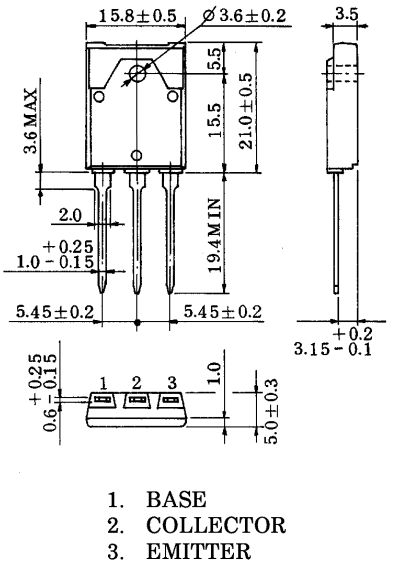
TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

# 2SA1804

POWER AMPLIFIER APPLICATIONS

Unit in mm

- Complementary to 2SC4689
- Recommend for 55W High Fidelity Audio Frequency Amplifier output Stage.




1. BASE
2. COLLECTOR
3. EMITTER

| | |
|---|---|
| JEDEC | — |
| EIAJ | — |
| TOSHIBA | 2-16F1A |

Weight : 5.8g

MAXIMUM RATINGS (Ta = 25°C)

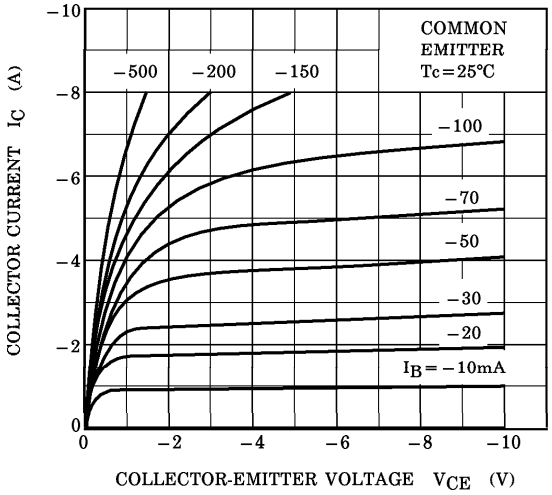
| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|---|---|---|---|---|
| Collector-Base Voltage | | $V_{CBO}$ | −120 | V |
| Collector-Emitter Voltage | | $V_{CEO}$ | −120 | V |
| Emitter-Base Voltage | | $V_{EBO}$ | −5 | V |
| Collector Current | DC | $I_C$ | −8 | A |
| | Pulse | $I_{CP}$ | −16 | |
| Base Current | | $I_B$ | −0.8 | A |
| Collector Power Dissipation (Tc = 25°C) | | $P_C$ | 70 | W |
| Junction Temperature | | $T_j$ | 150 | °C |
| Storage Temperature Range | | $T_{stg}$ | −55~150 | °C |

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

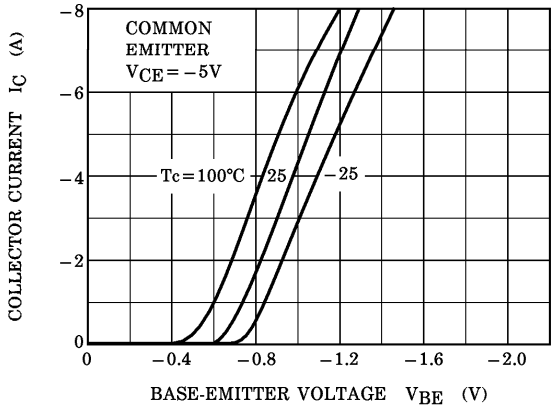
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Collector Cut-off Current | $I_{CBO}$ | $V_{CB}$ = −120V, $I_E$ = 0 | — | — | −5.0 | μA |
| Emitter Cut-off Current | $I_{EBO}$ | $V_{EB}$ = −5V, $I_C$ = 0 | — | — | −5.0 | μA |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C$ = −50mA, $I_B$ = 0 | −120 | — | — | V |
| DC Current Gain | $h_{FE(1)}$ (Note) | $V_{CE}$ = −5V, $I_C$ = −1A | 55 | — | 160 | |
| | $h_{FE(2)}$ | $V_{CE}$ = −5V, $I_C$ = −4A | 35 | 75 | — | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$ = −6A, $I_B$ = −0.6A | — | −0.80 | −2.0 | V |
| Base-Emitter Voltage | $V_{BE}$ | $V_{CE}$ = −5V, $I_C$ = −4A | — | −0.97 | −1.5 | V |
| Transition Frequency | $f_T$ | $V_{CE}$ = −5V, $I_C$ = −1A | — | 30 | — | MHz |
| Collector Output Capacitance | $C_{ob}$ | $V_{CB}$ = −10V, $I_E$ = 0, f = 1MHz | — | 420 | — | pF |

Note : $h_{FE(1)}$ Classification R : 55~110, O : 80~160

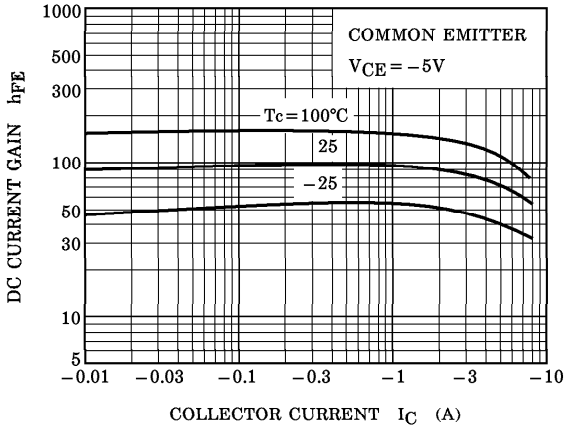
$I_C - V_{CE}$



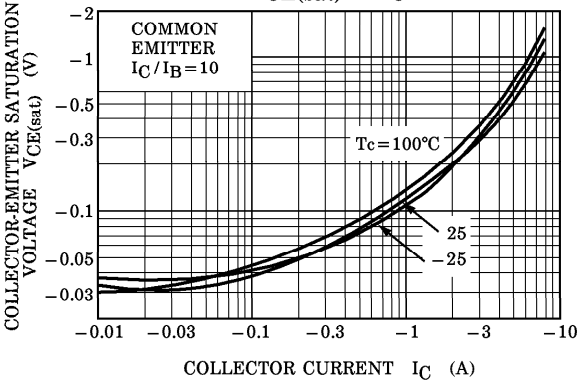

$I_C - V_{BE}$



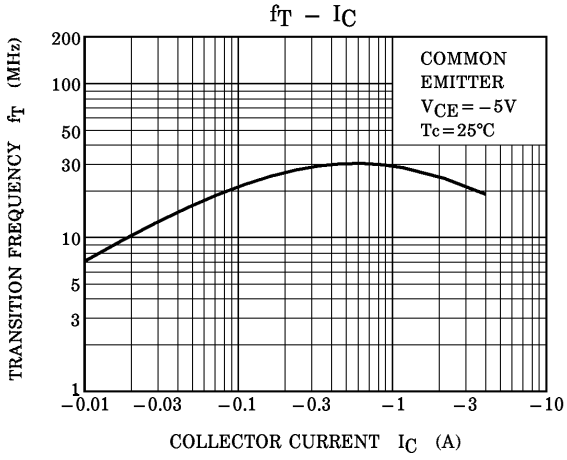

$h_{FE} - I_C$



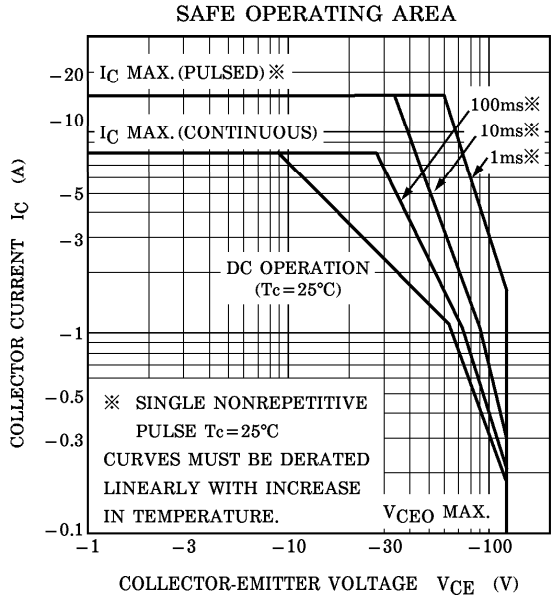

$V_{CE(sat)} - I_C$




$f_T - I_C$




SAFE OPERATING AREA



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