

# 2SA1094

SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

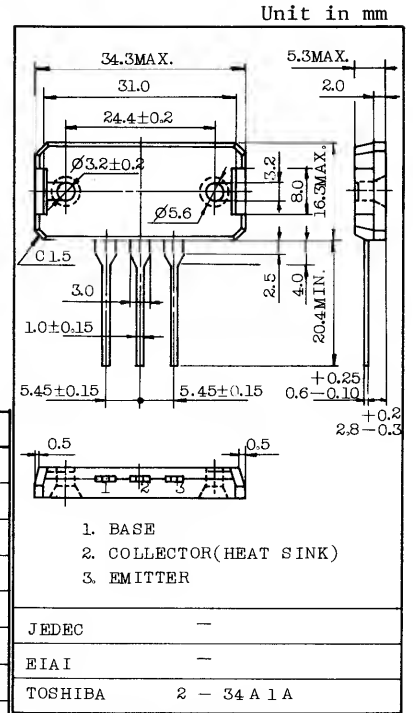
POWER AMPLIFIER APPLICATIONS.

FEATURES:

- High Breakdown Voltage :  $V_{CE0} = -140V$
- High Transition Frequency :  $f_T = 70MHz$  (Typ.)
- Complementary to 2SC2564.
- Recommended for 80W High-Fidelity Audio Frequency Amplifier Output Stage.

MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

| CHARACTERISTIC  | SYMBOL    | RATING  | UNIT       |
|---|-----------|---------|------------|
| Collector-Base Voltage                                | $V_{CBO}$ | -140    | V          |
| Collector-Emitter Voltage                             | $V_{CEO}$ | -140    | V          |
| Emitter-Base Voltage                                  | $V_{EBO}$ | -5      | V          |
| Collector Current                                     | $I_C$     | -12     | A          |
| Emitter Current                                       | $I_E$     | 12      | A          |
| Collector Power Dissipation<br>( $T_c = 25^\circ C$ ) | $P_C$     | 120     | W          |
| Junction Temperature                                  | $T_j$     | 150     | $^\circ C$ |
| Storage Temperature Range                             | $T_{stg}$ | -55~150 | $^\circ C$ |



Weight : 10.8g

ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

| CHARACTERISTIC                       | SYMBOL                | TEST CONDITION                     | MIN. | TYP. | MAX. | UNIT    |
|--------------------------------------|-----------------------|------------------------------------|------|------|------|---------|
| Collector Cut-off Current            | $I_{CBO}$             | $V_{CB} = -140V, I_E = 0$          | -    | -    | -50  | $\mu A$ |
| Emitter Cut-off Current              | $I_{EBO}$             | $V_{EB} = -5V, I_C = 0$            | -    | -    | -50  | $\mu A$ |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$         | $I_C = -0.1A, I_B = 0$             | -140 | -    | -    | V       |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$         | $I_E = -0.01A, I_C = 0$            | -5   | -    | -    | V       |
| DC Current Gain                      | $h_{FE(1)}$<br>(Note) | $V_{CE} = -5V, I_C = -1A$          | 55   | -    | 240  |         |
|                                      | $h_{FE(2)}$           | $V_{CE} = -5V, I_C = -5A$          | 30   | -    | -    |         |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$         | $I_C = -5A, I_B = -0.5A$           | -    | -    | -2.0 | V       |
| Base-Emitter Voltage                 | $V_{BE}$              | $V_{CE} = -5V, I_C = -5A$          | -    | -    | -2.0 | V       |
| Transition Frequency                 | $f_T$                 | $V_{CE} = -10V, I_C = -1A$         | -    | 70   | -    | MHz     |
| Collector Output Capacitance         | $C_{ob}$              | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | -    | 220  | -    | pF      |

Note :  $h_{FE(1)}$  Classification R : 55~110, O : 80~160, Y : 120~240

