

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA965

POWER AMPLIFIER APPLICATIONS.

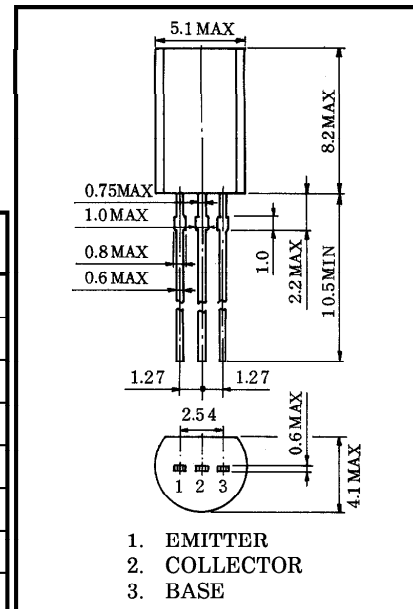
DRIVER STAGE AMPLIFIER APPLICATIONS.

Unit in mm

- Complementary to 2SC2235.

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC              | SYMBOL           | RATING  | UNIT |
|-----------------------------|------------------|---------|------|
| Collector-Base Voltage      | V <sub>CB0</sub> | -120    | V    |
| Collector-Emitter Voltage   | V <sub>CEO</sub> | -120    | V    |
| Emitter-Base Voltage        | V <sub>EBO</sub> | -5      | V    |
| Collector Current           | I <sub>C</sub>   | -800    | mA   |
| Emitter Current             | I <sub>E</sub>   | 800     | mA   |
| Collector Power Dissipation | P <sub>C</sub>   | 900     | mW   |
| Junction Temperature        | T <sub>j</sub>   | 150     | °C   |
| Storage Temperature Range   | T <sub>stg</sub> | -55~150 | °C   |



JEDEC TO-92MOD

EIAJ —

TOSHIBA 2-5J1A

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Weight : 0.36g

| CHARACTERISTIC                       | SYMBOL                    | TEST CONDITION                                       | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|---------------------------|--|------|------|------|------|
| Collector Cut-off Current            | I <sub>CBO</sub>          | V <sub>CB</sub> = -120V, I <sub>E</sub> = 0          | —    | —    | -100 | nA   |
| Emitter Cut-off Current              | I <sub>EBO</sub>          | V <sub>EB</sub> = -5V, I <sub>C</sub> = 0            | —    | —    | -100 | nA   |
| Collector-Emitter Breakdown Voltage  | V <sub>(BR)CEO</sub>      | I <sub>C</sub> = -10mA, I <sub>B</sub> = 0           | -120 | —    | —    | V    |
| Emitter-Base Breakdown Voltage       | V <sub>(BR)EBO</sub>      | I <sub>E</sub> = -1mA, I <sub>C</sub> = 0            | -5   | —    | —    | V    |
| DC Current Gain                      | h <sub>FE</sub><br>(Note) | V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA       | 80   | —    | 240  |      |
| Collector-Emitter Saturation Voltage | V <sub>CE(sat)</sub>      | I <sub>C</sub> = -500mA, I <sub>B</sub> = -50mA      | —    | —    | -1.0 | V    |
| Base-Emitter Voltage                 | V <sub>BE</sub>           | V <sub>CE</sub> = -5V, I <sub>C</sub> = -500mA       | —    | —    | -1.0 | V    |
| Transition Frequency                 | f <sub>T</sub>            | V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA       | —    | 120  | —    | MHz  |
| Collector Output Capacitance         | C <sub>ob</sub>           | V <sub>CB</sub> = -10V, I <sub>E</sub> = 0, f = 1MHz | —    | —    | 40   | pF   |

Note : h<sub>FE</sub> Classification O : 80~160, Y : 120~240

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