

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SB908

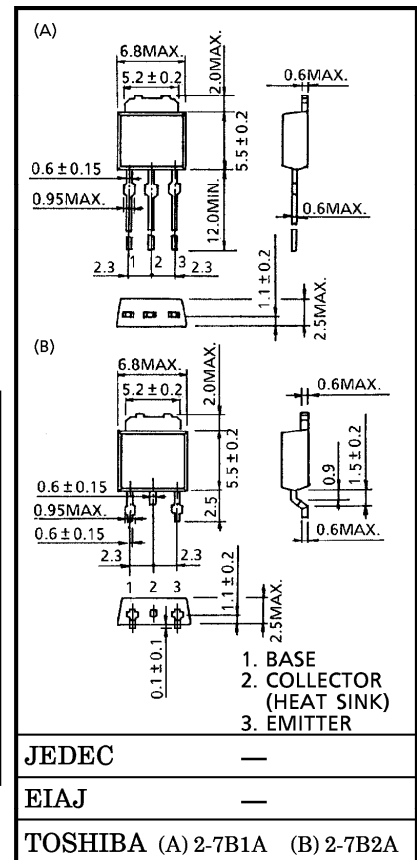
SWITCHING APPLICATIONS
 HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS
 POWER AMPLIFIER APPLICATIONS

- High DC Current Gain
 : $h_{FE(1)} = 2000$ (Min.) ($V_{CE} = -2\text{ V}$, $I_C = -1\text{ A}$)
- Low Saturation Voltage : $V_{CE(sat)} = -1.5\text{ V}$ (Max.) ($I_C = -3\text{ A}$)
- Complementary to 2SD1223.

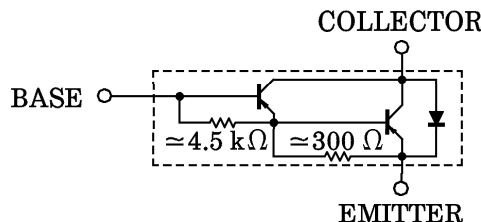
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|--------------------------|------------------|
| Collector-Base Voltage | V_{CBO} | -100 | V |
| Collector-Emitter Voltage | V_{CEO} | -80 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -4 | A |
| Base Current | I_B | -0.4 | A |
| Collector Power Dissipation | P_C | $T_a = 25^\circ\text{C}$ | 1.0 |
| | | $T_c = 25^\circ\text{C}$ | 15 |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^\circ\text{C}$ |

Unit in mm



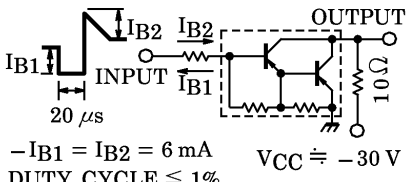
EQUIVALENT CIRCUIT



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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------------------------|-------------------|---------------|--|------|------|------|---------------|
| Collector Cut-off Current | | I_{CBO} | $V_{CB} = -100\text{ V}, I_E = 0$ | — | — | -20 | μA |
| Emitter Cut-off Current | | I_{EBO} | $V_{EB} = -5\text{ V}, I_C = 0$ | — | — | -2.5 | mA |
| Collector-Emitter Breakdown Voltage | | $V_{(BR)CEO}$ | $I_C = -10\text{ mA}, I_B = 0$ | -80 | — | — | V |
| DC Current Gain | | $h_{FE(1)}$ | $V_{CE} = -2\text{ V}, I_C = -1\text{ A}$ | 2000 | — | — | |
| | | $h_{FE(2)}$ | $V_{CE} = -2\text{ V}, I_C = -3\text{ A}$ | 1000 | — | — | |
| Saturation Voltage | Collector-Emitter | $V_{CE(sat)}$ | $I_C = -3\text{ A}, I_B = -6\text{ mA}$ | — | — | -1.5 | V |
| | Base-Emitter | $V_{BE(sat)}$ | $I_C = -3\text{ A}, I_B = -6\text{ mA}$ | — | — | -2.0 | |
| Switching Time | Turn-on Time | t_{on} |  <p> $-I_{B1} = I_{B2} = 6\text{ mA}$ $V_{CC} = -30\text{ V}$ $DUTY\ CYCLE \leq 1\%$ </p> | — | 0.15 | — | μs |
| | Storage Time | t_{stg} | | — | 0.80 | — | |
| | Fall Time | t_f | | — | 0.40 | — | |

