

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

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2SD1410A

IGNITER APPLICATIONS

HIGH VOLTAGE SWITCHING APPLICATIONS

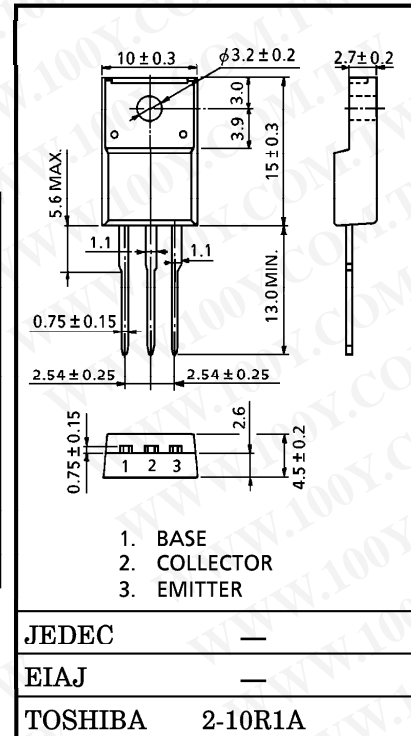
- High DC Current Gain : $h_{FE} = 2000$ (Min.) ($V_{CE} = 2V, I_C = 2A$)

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

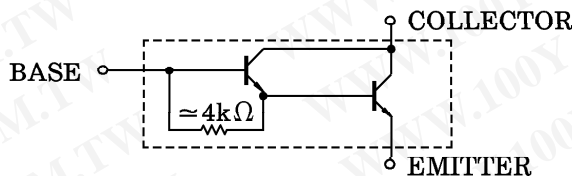
| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|------------------------------------|-----------|---------|------------|
| Collector-Base Voltage | V_{CBO} | 300 | V |
| Collector-Emitter Voltage | V_{CEO} | 250 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 6 | A |
| Base Current | I_B | 1 | A |
| Collector Power | P_C | 2.0 | W |
| Dissipation ($T_c = 25^\circ C$) | | 25 | |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^\circ C$ |

INDUSTRIAL APPLICATIONS

Unit in mm



EQUIVALENT CIRCUIT



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- The information contained herein is subject to change without notice.

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT | |
|--------------------------------------|----------------|-----------------------------------|---|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 300V, I_E = 0$ | — | — | 0.5 | mA | |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = 5V, I_C = 0$ | — | — | 0.5 | mA | |
| Collector-Emitter Breakdown Voltage | $V_{(BR) CEO}$ | $I_C = 0.5A, L = 40mH$ | 250 | — | — | V | |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE} = 2V, I_C = 2A$ | 2000 | — | — | | |
| | $h_{FE(2)}$ | $V_{CE} = 2V, I_C = 4A$ | 200 | — | — | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 4A, I_B = 0.04A$ | — | — | 2.0 | V | |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 4A, I_B = 0.04A$ | — | — | 2.5 | V | |
| Collector Output Capacitance | C_{ob} | $V_{CB} = 50V, I_E = 0, f = 1MHz$ | — | 30 | — | pF | |
| Switching Time | Turn-on Time | t_{on} | <p> $I_{B1} = -I_{B2} = 0.04A, V_{CC} = 100V$ DUTY CYCLE $\leq 1\%$ </p> | — | 0.2 | — | μs |
| | Storage Time | t_{stg} | | — | 1.0 | — | |
| | Fall Time | t_f | | — | 0.2 | — | |

