

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD553

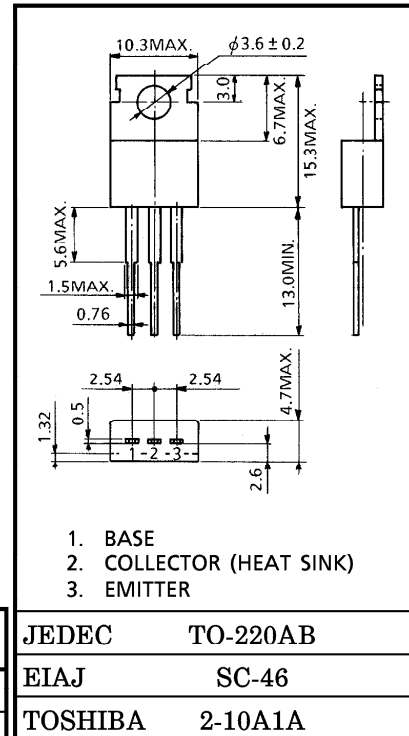
HIGH CURRENT SWITCHING APPLICATIONS

POWER AMPLIFIER APPLICATIONS

INDUSTRIAL APPLICATIONS

Unit in mm

- Low Saturation Voltage : $V_{CE(sat)} = 0.4V$ (Max.) (at $I_C = 4A$)
- Complementary to 2SB553.



MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|--------------------|---------|------|
| Collector-Base Voltage | V_{CBO} | 70 | V |
| Collector-Emitter Voltage | V_{CEO} | 50 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 7 | A |
| Base Current | I_B | 1 | A |
| Collector Power Dissipation | $T_a = 25^\circ C$ | 1.5 | W |
| | $T_c = 25^\circ C$ | 40 | |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{stg} | -55~150 | °C |

Weight : 1.9g
Mounting Kit No. AC75

961001EAA2

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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 | | ICBO | V _{CB} = 70V, I _E = 0 | — | — | 30 | μA |
| Emitter Cut-off Current | | IEBO | V _{EB} = 5V, I _C = 0 | — | — | 50 | μA |
| Collector-Emitter Breakdown Voltage | | V (BR) CEO | I _C = 50mA, I _B = 0 | 50 | — | — | V |
| DC Current Gain | h _{FE} (1) (Note) | | V _{CE} = 1V, I _C = 1A | 70 | — | 240 | |
| | h _{FE} (2) | | V _{CE} = 1V, I _C = 4A | 30 | — | — | |
| Collector-Emitter Saturation Voltage | | V _{CE} (sat) | I _C = 4A, I _B = 0.4A | — | 0.2 | 0.4 | V |
| Base-Emitter Saturation Voltage | | V _{BE} (sat) | I _C = 4A, I _B = 0.4A | — | 0.9 | 1.2 | V |
| Transition Frequency | | f _T | V _{CE} = 4V, I _C = 1A | — | 10 | — | MHz |
| Collector Output Capacitance | | C _{ob} | V _{CB} = 10V, I _E = 0, f = 1MHz | — | 250 | — | pF |
| Switching Time | Turn-on Time | t _{on} | <p>IN-PUT I_{B1} I_{B2} OUT-PUT</p> <p>V_{CC} = 30V</p> | — | 0.2 | — | μs |
| | Storage Time | t _{stg} | | — | 2.5 | — | |
| | Fall Time | t _f | | I _{B1} = -I _{B2} = 0.3A, DUTY CYCLE ≤ 1% | — | 0.5 | |

Note : h_{FE} (1) Classification O : 70~140, Y : 120~240

