

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA1887

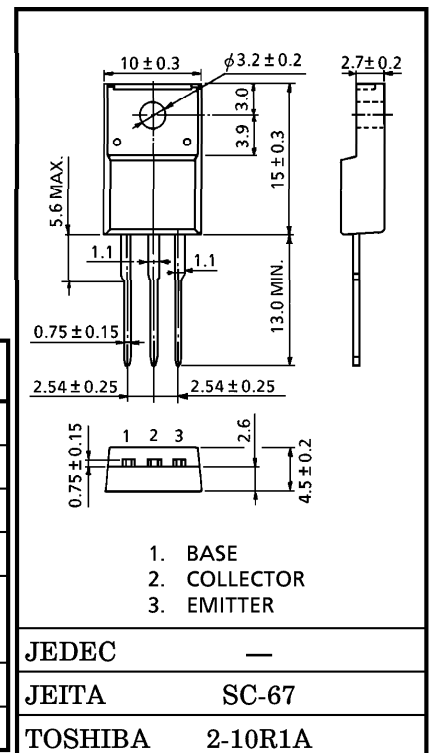
HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm

- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = -0.4V$  (Max.) at  $I_C = -5A$

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

| CHARACTERISTIC              |                    | SYMBOL    | RATING  | UNIT       |
|-----------------------------|--------------------|-----------|---------|------------|
| Collector-Base Voltage      |                    | $V_{CB0}$ | -80     | V          |
| Collector-Emitter Voltage   |                    | $V_{CEO}$ | -50     | V          |
| Emitter-Base Voltage        |                    | $V_{EB0}$ | -7      | V          |
| Collector Current           |                    | $I_C$     | -10     | A          |
| Collector Power Dissipation | $T_a = 25^\circ C$ | $P_C$     | 2.0     | W          |
|                             | $T_c = 25^\circ C$ |           | 25      |            |
| Junction Temperature        |                    | $T_j$     | 150     | $^\circ C$ |
| Storage Temperature Range   |                    | $T_{stg}$ | -55~150 | $^\circ C$ |



Weight : 1.7g (Typ.)

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

| CHARACTERISTIC                      |                   | SYMBOL        | TEST CONDITION                     | MIN. | TYP.  | MAX. | UNIT    |
|-------------------------------------|-------------------|---------------|------------------------------------|------|-------|------|---------|
| Collector Cut-off Current           |                   | $I_{CB0}$     | $V_{CB} = -70V, I_E = 0$           | —    | —     | -1   | $\mu A$ |
| Emitter Cut-off Current             |                   | $I_{EB0}$     | $V_{EB} = -7V, I_C = 0$            | —    | —     | -1   | $\mu A$ |
| Collector-Emitter Breakdown Voltage |                   | $V_{(BR)CEO}$ | $I_C = -10mA, I_B = 0$             | -50  | —     | —    | V       |
| DC Current Gain                     |                   | $h_{FE}$      | $V_{CE} = -1V, I_C = -1A$          | 120  | —     | 400  |         |
| Saturation Voltage                  | Collector-Emitter | $V_{CE(sat)}$ | $I_C = -5A, I_B = -0.25A$          | —    | -0.2  | -0.4 | V       |
|                                     | Base-Emitter      | $V_{BE(sat)}$ | $I_C = -5A, I_B = -0.25A$          | —    | -0.95 | -1.4 |         |
| Transition Frequency                |                   | $f_T$         | $V_{CE} = -1V, I_C = -1A$          | —    | 45    | —    | MHz     |
| Collector Output Capacitance        |                   | $C_{ob}$      | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | —    | 215   | —    | pF      |

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