

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA1483

HIGH FREQUENCY AMPLIFIER APPLICATIONS

VIDEO AMPLIFIER APPLICATIONS

HIGH SPEED SWITCHING APPLICATIONS

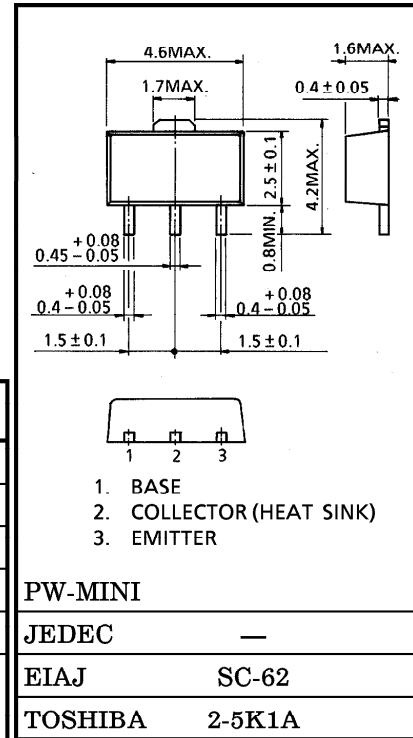
- High Transition Frequency :  $f_T = 200\text{MHz}$  (Typ.)
- Low Collector Output Capacitance :  $C_{ob} = 3.5\text{pF}$  (Typ.)
- Complementary to 2SC3803

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

| CHARACTERISTIC               | SYMBOL    | RATING  | UNIT             |
|------------------------------|-----------|---------|------------------|
| Collector-Base Voltage       | $V_{CBO}$ | -60     | V                |
| Collector-Emitter Voltage    | $V_{CEO}$ | -45     | V                |
| Emitter-Base Voltage         | $V_{EBO}$ | -5      | V                |
| Continuous Collector Current | $I_C$     | -200    | mA               |
| Continuous Base Current      | $I_B$     | -50     | mA               |
| Collector Power Dissipation  | $P_C$     | 500     | mW               |
|                              | $P_C^*$   | 1000    |                  |
| Junction Temperature         | $T_j$     | 150     | $^\circ\text{C}$ |
| Storage Temperature Range    | $T_{stg}$ | -55~150 | $^\circ\text{C}$ |

\* : Mounted on ceramic substrate (250mm<sup>2</sup>×0.8t)

Unit in mm



PW-MINI

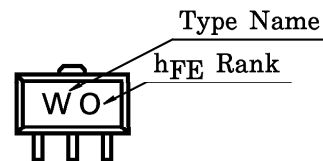
JEDEC —

EIAJ SC-62

TOSHIBA 2-5K1A

Weight : 0.05g

Marking



961001EAA2

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC                       | SYMBOL                | TEST CONDITION                          | MIN. | TYP. | MAX. | UNIT     |   |     |   |    |
|--------------------------------------|-----------------------|---|------|------|------|----------|---|-----|---|----|
| Collector Cut-off Current            | $I_{CBO}$             | $V_{CB} = -45V, I_E = 0$                | —    | —    | -0.1 | $\mu A$  |   |     |   |    |
| Emitter Cut-off Current              | $I_{EBO}$             | $V_{EB} = -5V, I_C = 0$                 | —    | —    | -0.1 | $\mu A$  |   |     |   |    |
| DC Current Gain                      | $h_{FE(1)}$<br>(Note) | $V_{CE} = -1V, I_C = -10mA$             | 40   | —    | 240  |          |   |     |   |    |
|                                      | $h_{FE(2)}$           | $V_{CE} = -3V, I_C = -200mA$            | 20   | —    | —    |          |   |     |   |    |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$         | $I_C = -100mA, I_B = -10mA$             | —    | —    | -0.3 | V        |   |     |   |    |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$         | $I_C = -100mA, I_B = -10mA$             | —    | —    | -1.0 | V        |   |     |   |    |
| Transition Frequency                 | $f_T$                 | $V_{CE} = -10V, I_C = -10mA$            | 100  | 200  | —    | MHz      |   |     |   |    |
| Input Impedance (Real Part)          | $Re(h_{ie})$          | $V_{CE} = -10V, I_E = 10mA, f = 200MHz$ | —    | —    | 120  | $\Omega$ |   |     |   |    |
| Collector Output Capacitance         | $C_{ob}$              | $V_{CB} = -10V, I_E = 0, f = 1MHz$      | —    | 3.5  | 5    | pF       |   |     |   |    |
| Switching Time                       | Turn-on Time          | $t_{on}$                                |      |      |      |          | — | 40  | — | ns |
|                                      | Storage Time          | $t_{stg}$                               |      |      |      |          | — | 250 | — |    |
|                                      | Fall Time             | $t_f$                                   |      |      |      |          | — | 30  | — |    |

Note :  $h_{FE(1)}$  Classification    R : 40~80,    O : 70~140,    Y : 120~240

