

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

2SA1384

HIGH VOLTAGE CONTROL APPLICATIONS

PLASMA DISPLAY, NIXIE TUBE DRIVER APPLICATIONS

CATHODE RAY TUBE BRIGHTNESS CONTROL APPLICATIONS

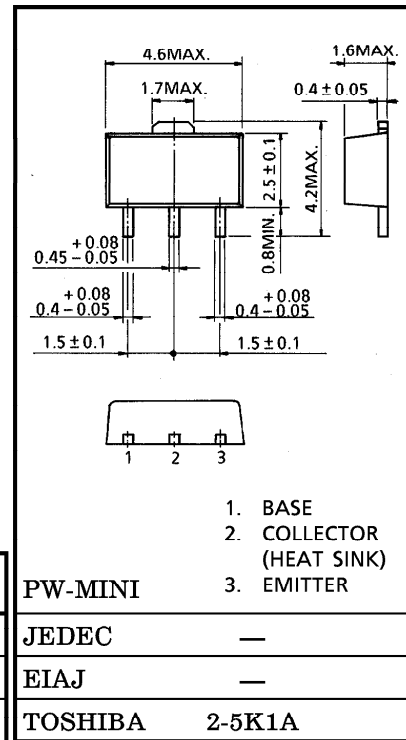
- High Voltage : $V_{CBO} = -300V$, $V_{CEO} = -300V$
- Low Saturation Voltage : $V_{CE(sat)} = -0.5V$ (Max.)
- Small Collector Output Capacitance : $C_{ob} = 6pF$ (Typ.)
- Complementary to 2SC3515
- Small Flat Package
- $P_C = 1 \sim 2W$ (Mounted Ceramic Substrate)

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

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|---------|------------|
| Collector-Base Voltage | V_{CBO} | -300 | V |
| Collector-Emitter Voltage | V_{CEO} | -300 | V |
| Emitter-Base Voltage | V_{EBO} | -8 | V |
| Collector Current | I_C | -100 | mA |
| Base Current | I_B | -20 | mA |
| Collector Power Dissipation | P_C | 500 | mW |
| Collector Power Dissipation | P_C^* | 1000 | mW |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^\circ C$ |

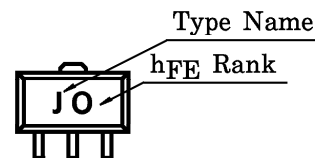
P_C^* : 2SA1384 mounted on ceramic substrate ($250mm^2 \times 0.8mm^t$)

Unit in mm



Weight : 0.05g

Marking



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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-----------------------|------------------------------------|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = -300V, I_E = 0$ | — | — | -0.1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = -8V, I_C = 0$ | — | — | -0.1 | μA |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = -0.1mA, I_E = 0$ | -300 | — | — | V |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = -1mA, I_B = 0$ | -300 | — | — | V |
| DC Current Gain | $h_{FE(1)}$ (Note) | $V_{CE} = -10V, I_C = -20mA$ | 30 | — | 150 | |
| | $h_{FE(2)}$ | $V_{CE} = -10V, I_C = -1mA$ | 20 | — | — | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -20mA, I_B = -2mA$ | — | — | -0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = -20mA, I_B = -2mA$ | — | — | -1.0 | V |
| Transition Frequency | f_T | $V_{CE} = -10V, I_C = -20mA$ | 50 | 70 | — | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB} = -20V, I_E = 0, f = 1MHz$ | — | 6 | 8 | pF |

Note : $h_{FE(1)}$ Classification R : 30~90 O : 50~150

