

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

## 2SA1091

HIGH VOLTAGE CONTROL APPLICATIONS

Unit in mm

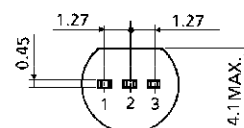
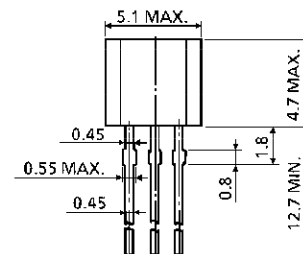
PLASMA DISPLAY, NIXIE TUBE DRIVER APPLICATIONS

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 2SC2551.

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 | $P_C$     | 400     | mW         |
| Junction Temperature        | $T_j$     | 150     | $^\circ C$ |
| Storage Temperature Range   | $T_{stg}$ | -55~150 | $^\circ C$ |



1. EMITTER
2. COLLECTOR
3. BASE

JEDEC TO-92

EIAJ SC-43

TOSHIBA 2-5F1B

Weight : 0.21g

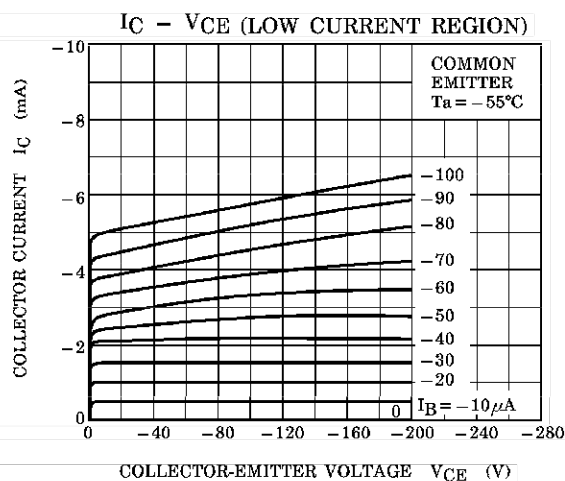
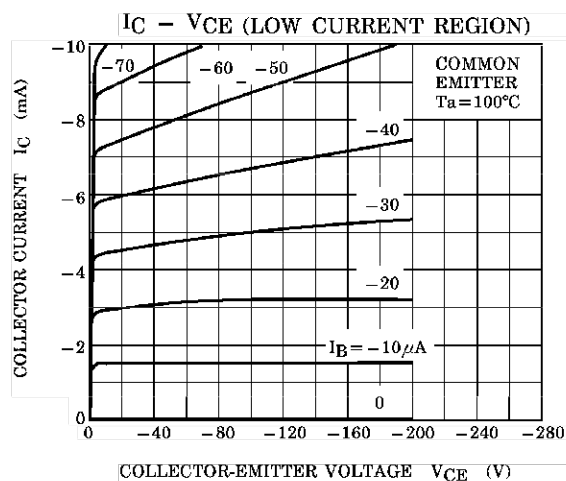
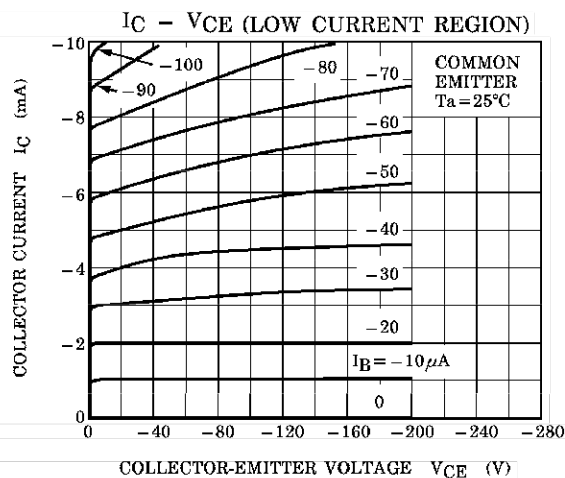
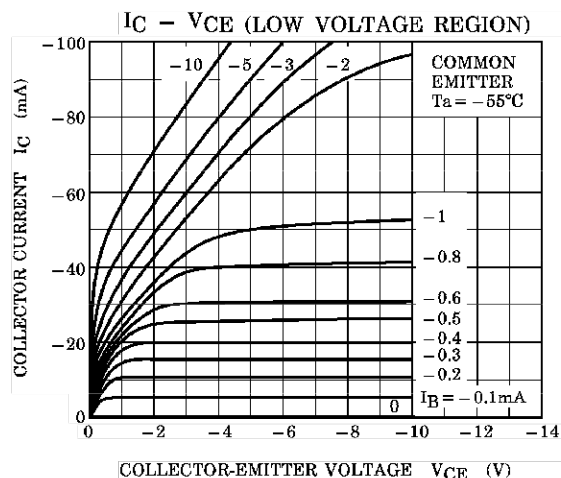
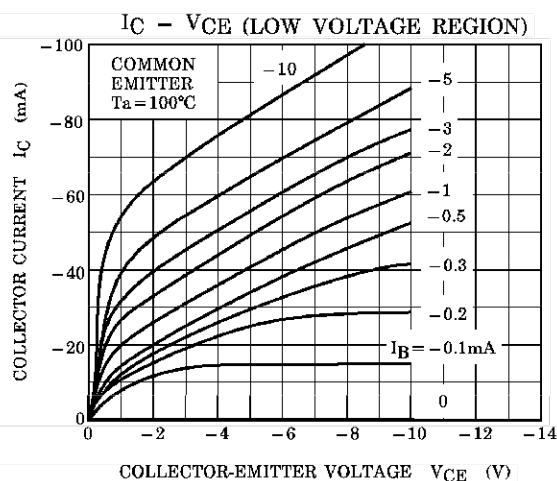
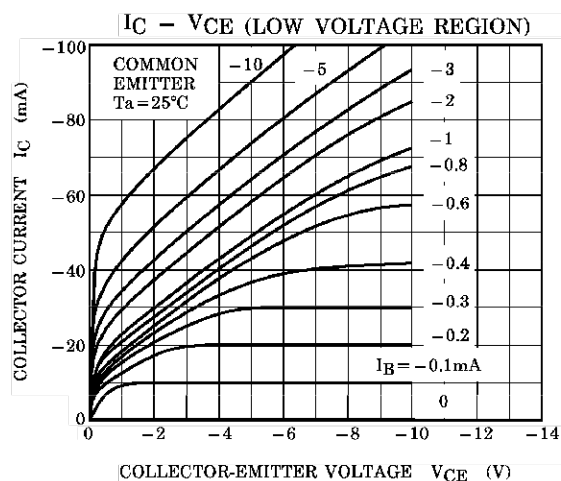
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

| CHARACTERISTIC                       | SYMBOL             | TEST CONDITION                           | MIN. | TYP. | MAX. | UNIT    |
|--------------------------------------|--------------------|------------------------------------------|------|------|------|---------|
| Collector Cut-off Current            | $I_{CBO}$          | $V_{CB} = -300V$ , $I_E = 0$             | —    | —    | -0.1 | $\mu A$ |
| Emitter Cut-off Current              | $I_{EBO}$          | $V_{EB} = -8V$ , $I_C = 0$               | —    | —    | -0.1 | $\mu A$ |
| 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      | $V_{BE(sat)}$      | $I_C = -20mA$ , $I_B = -2mA$             | —    | —    | -1.2 | V       |
| Transition Frequency                 | $f_T$              | $V_{CE} = -10V$ , $I_C = -20mA$          | 40   | 60   | —    | 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

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