

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

## 2SD1294

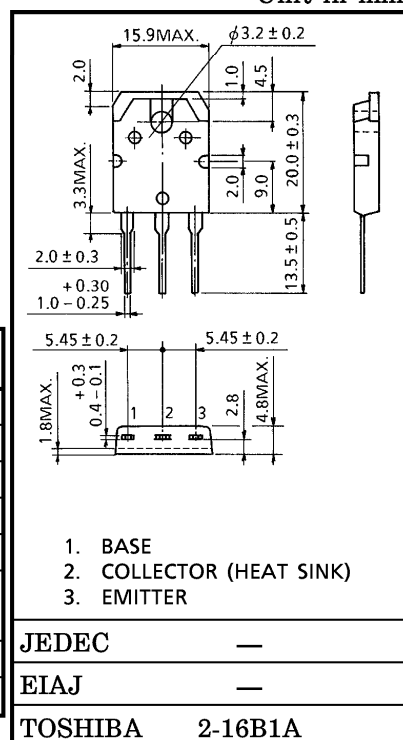
POWER REGULATOR FOR LINE OPERATED TV

Unit in mm

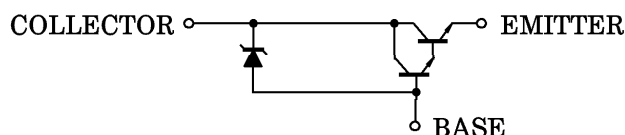
- Excellent Wide Safe Operating Area (80 W·s at  $T_c = 25^\circ\text{C}$ )
- Included Avalanche Diode :  $V_Z = 60 \pm 15 \text{ V}$
- High DC Current Gain :  $h_{FE} = 2000 \sim 20000$
- Darlington Connected Type.

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

| CHARACTERISTIC                                              |       | SYMBOL    | RATING         | UNIT             |
|-------------------------------------------------------------|-------|-----------|----------------|------------------|
| Collector-Base Voltage                                      |       | $V_{CBO}$ | $60 \pm 15$    | V                |
| Collector-Emitter Voltage                                   |       | $V_{CEO}$ | $60 \pm 15$    | V                |
| Emitter-Base Voltage                                        |       | $V_{EBO}$ | 6              | V                |
| Collector Current                                           | DC    | $I_C$     | 5              | A                |
|                                                             | Pulse | $I_{CP}$  | 20             | A                |
| Collector Power Dissipation<br>( $T_c = 25^\circ\text{C}$ ) |       | $P_C$     | 80             | W                |
| Junction Temperature                                        |       | $T_j$     | 150            | $^\circ\text{C}$ |
| Storage Temperature Range                                   |       | $T_{stg}$ | $-55 \sim 150$ | $^\circ\text{C}$ |



EQUIVALENT CIRCUIT



Weight : 4.6 g

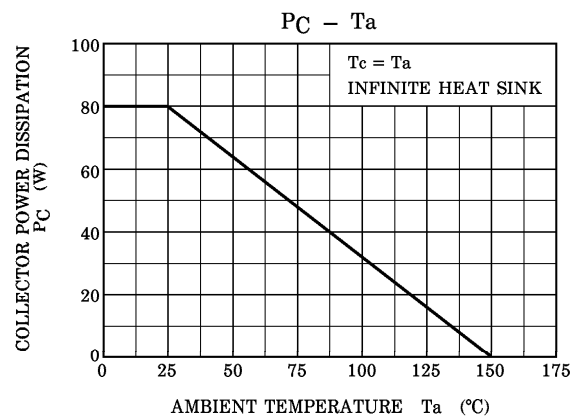
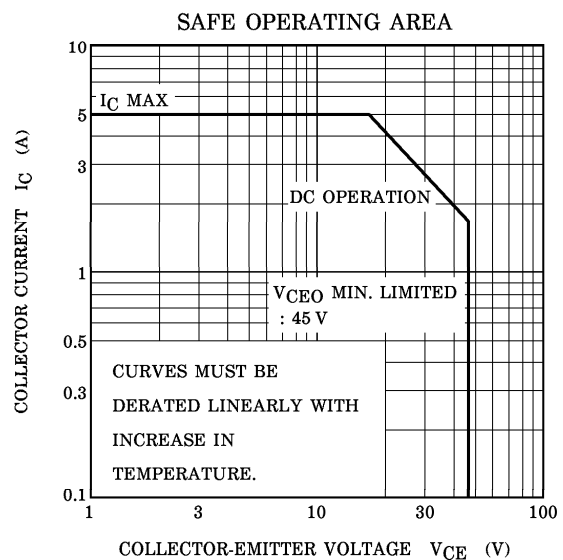
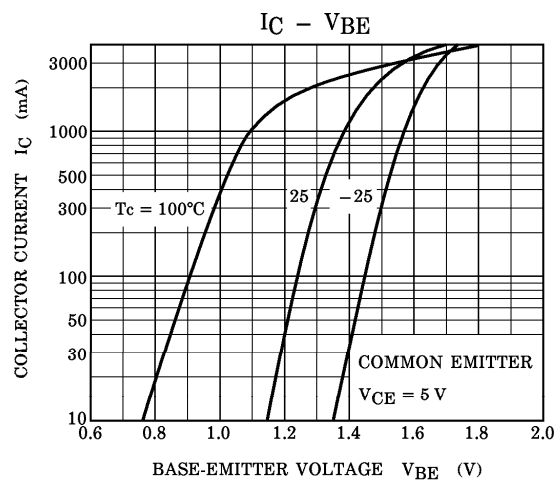
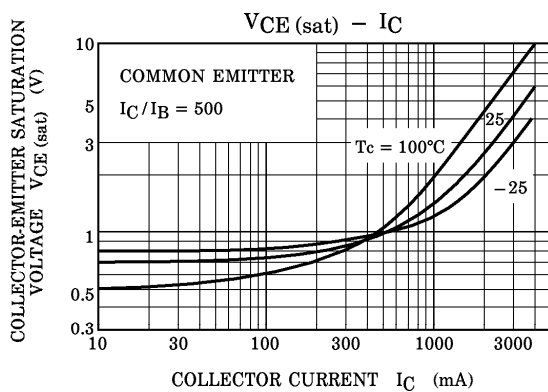
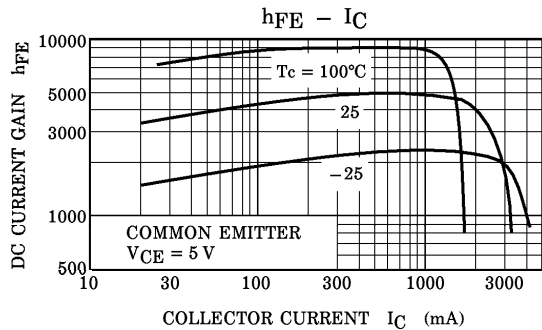
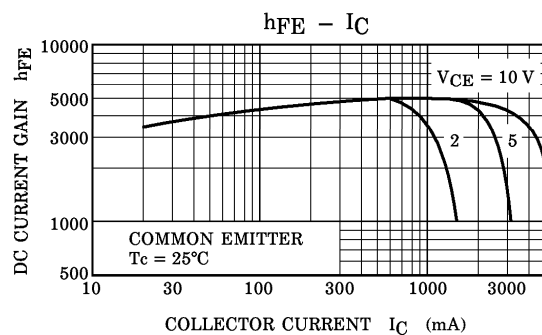
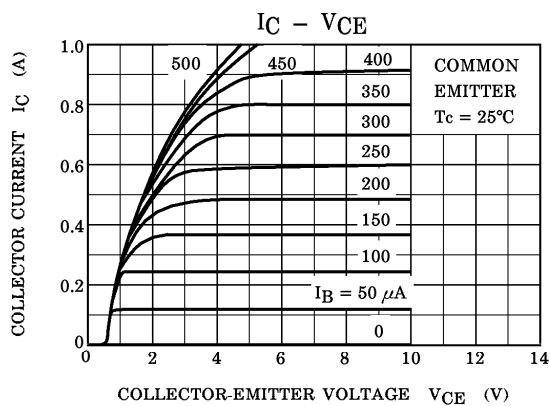
Mounting Kit No. AC73

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

| CHARACTERISTIC                       | SYMBOL            | TEST CONDITION                               | MIN. | TYP. | MAX.  | UNIT          |
|--------------------------------------|-------------------|----------------------------------------------|------|------|-------|---------------|
| Collector-Base Breakdown Voltage     | $V_{(BR)CBO}$     | $I_C = 100 \text{ mA}, I_E = 0$              | 45   | 60   | 75    | V             |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$     | $I_C = 100 \text{ mA}, I_B = 0$              | 45   | 60   | 75    | V             |
| Collector Cut-off Current            | $I_{EBO}$         | $V_{EB} = 6 \text{ V}, I_C = 0$              | —    | —    | 100   | $\mu\text{A}$ |
| DC Current Gain                      | $h_{FE}$          | $V_{CE} = 5 \text{ V}, I_C = 500 \text{ mA}$ | 2000 | —    | 20000 |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)} (1)$ | $I_C = 500 \text{ mA}, I_B = 1 \text{ mA}$   | —    | —    | 1.5   | V             |
|                                      | $V_{CE(sat)} (2)$ | $I_C = 1.0 \text{ A}, I_B = 1 \text{ mA}$    | —    | —    | 2.5   |               |
| Base-Emitter Voltage                 | $V_{BE}$          | $V_{CE} = 5 \text{ V}, I_C = 500 \text{ mA}$ | —    | —    | 1.8   | V             |
| Allowable Energy                     | $E_T$             | Application Circuit                          | 80   | —    | —     | W·s           |

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APPLICATION CIRCUIT

