

Ordering number : ENN6922

NPN Triple Diffused Planar Silicon Transistor



**2SD2646**

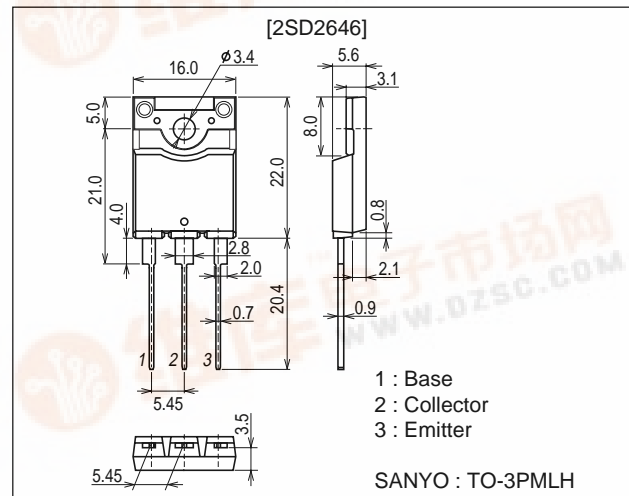
**Color TV Horizontal Deflection Output Applications**

**Features**

- High speed.
- High breakdown voltage( $V_{CBO}=1500V$ ).
- High reliability(Adoption of HVP process).
- Adoption of MBIT process.

**Package Dimensions**

unit : mm  
2174A



**Specifications**

**Absolute Maximum Ratings** at  $T_a=25^{\circ}C$

| Parameter                    | Symbol    | Conditions        | Ratings     | Unit        |
|------------------------------|-----------|-------------------|-------------|-------------|
| Collector-to-Base Voltage    | $V_{CBO}$ |                   | 1500        | V           |
| Collector-to-Emitter Voltage | $V_{CEO}$ |                   | 700         | V           |
| Emitter-to-Base Voltage      | $V_{EBO}$ |                   | 5           | V           |
| Collector Current            | $I_C$     |                   | 10          | A           |
| Collector Current (Pulse)    | $I_{CP}$  |                   | 25          | A           |
| Collector Dissipation        | $P_C$     |                   | 3.0         | W           |
|                              |           | $T_c=25^{\circ}C$ | 80          | W           |
| Junction Temperature         | $T_J$     |                   | 150         | $^{\circ}C$ |
| Storage Temperature          | $T_{stg}$ |                   | -55 to +150 | $^{\circ}C$ |

**Electrical Characteristics** at  $T_a=25^{\circ}C$

| Parameter                 | Symbol         | Conditions               | Ratings |     |     | Unit    |
|---------------------------|----------------|--------------------------|---------|-----|-----|---------|
|                           |                |                          | min     | typ | max |         |
| Collector Cutoff Current  | $I_{CBO}$      | $V_{CB}=800V, I_E=0$     |         |     | 10  | $\mu A$ |
| Collector Cutoff Current  | $I_{CES}$      | $V_{CE}=1500V, R_{BE}=0$ |         |     | 1.0 | mA      |
| Collector Sustain Voltage | $V_{CEO(sus)}$ | $I_C=100mA, I_B=0$       | 700     |     |     | V       |
| Emitter Cutoff Current    | $I_{EBO}$      | $V_{BE}=4V, I_C=0$       |         |     | 1.0 | mA      |

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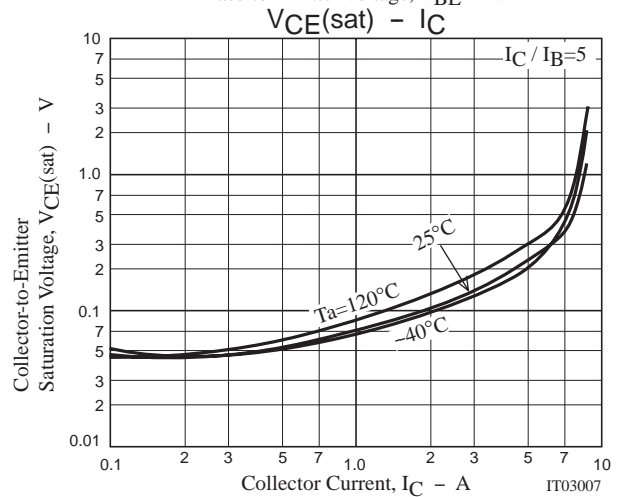
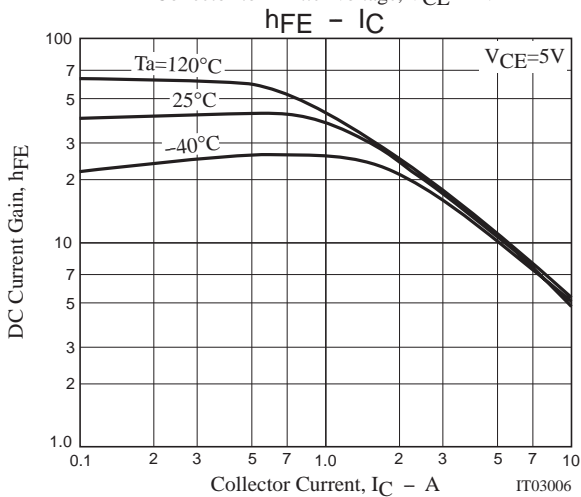
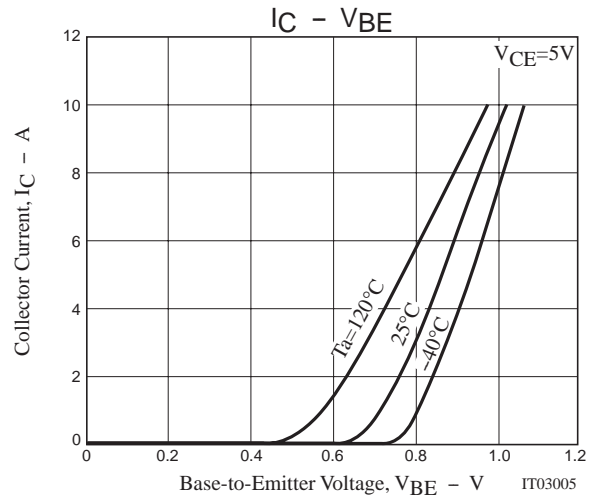
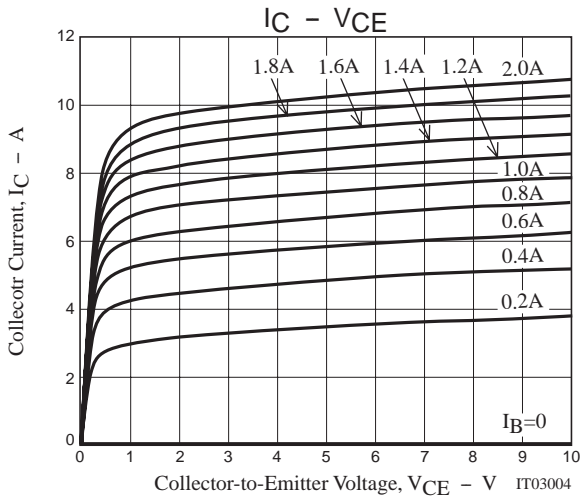
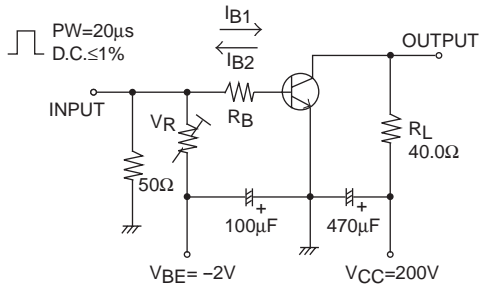


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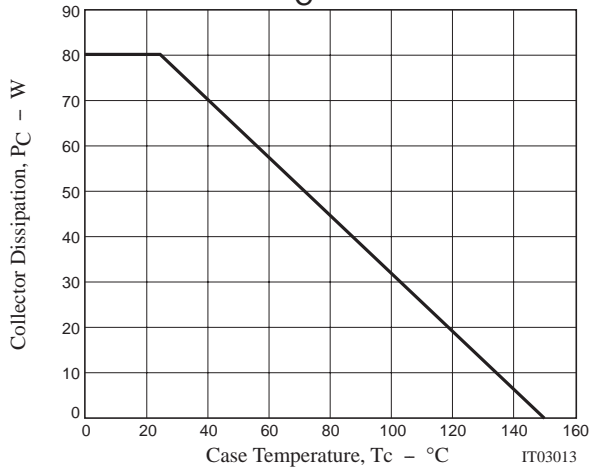
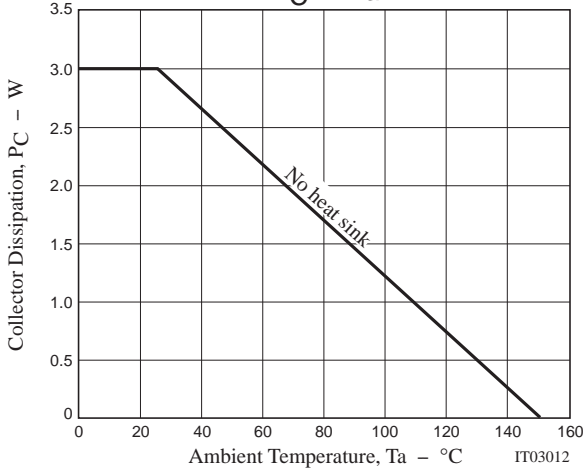
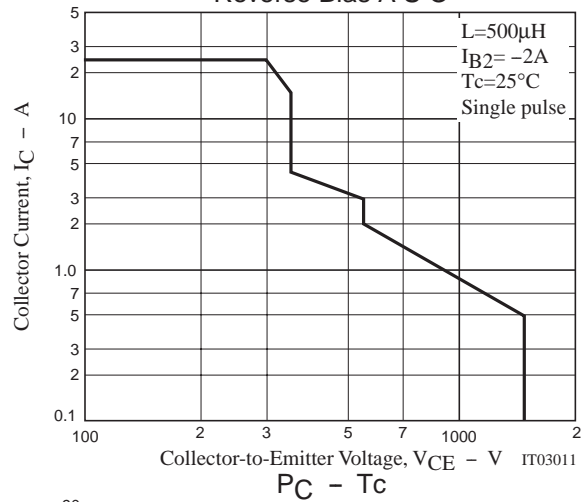
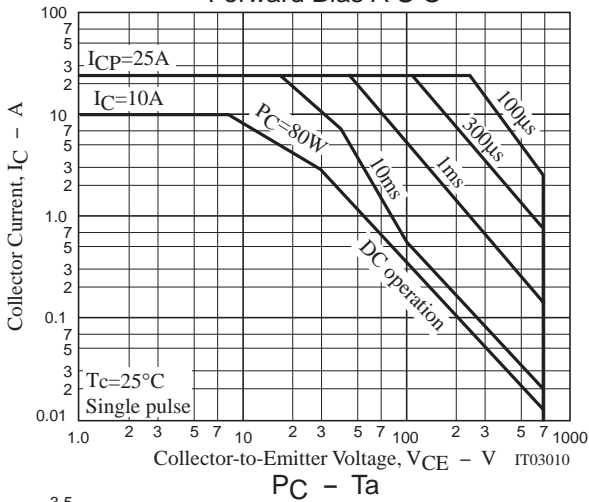
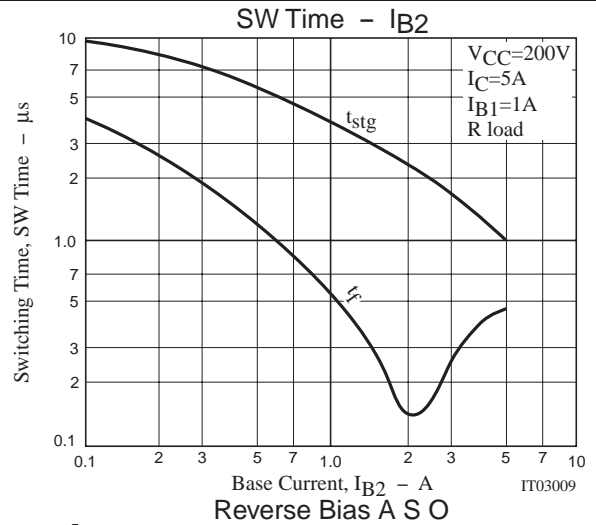
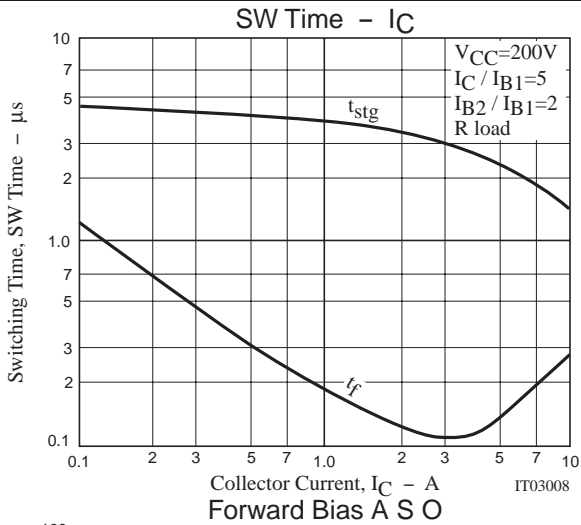
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| Parameter                               | Symbol        | Conditions                      | Ratings |     |     | Unit    |
|---|---------------|---------------------------------|---------|-----|-----|---------|
|   |               |                                 | min     | typ | max |         |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=7.2A, I_B=1.44A$           |         |     | 3   | V       |
| Base-to-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=7.2A, I_B=1.44A$           |         |     | 1.5 | V       |
| DC Current Gain                         | $h_{FE1}$     | $V_{CE}=5V, I_C=1A$             | 15      |     |     |         |
|   | $h_{FE2}$     | $V_{CE}=5V, I_C=8A$             | 5       |     | 8   |         |
| Fall Time                               | $t_f$         | $I_C=5A, I_{B1}=1A, I_{B2}=-2A$ |         |     | 0.3 | $\mu s$ |

## Switching Time Test Circuit



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