

NPN Triple Diffused Planar Silicon Transistor

2SC3688

**Ultrahigh-Definition CRT Display
Horizontal Deflection Output Applications**

Applications

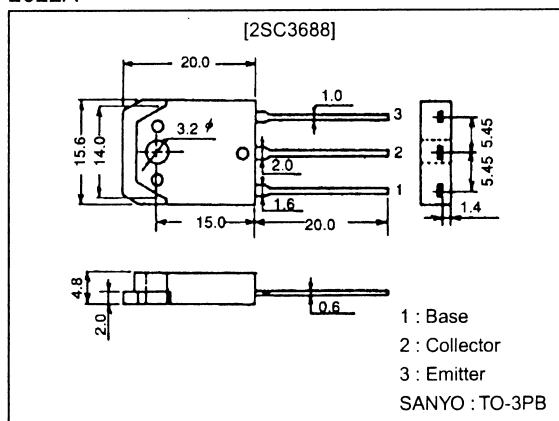
- Ultrahigh-definition color display horizontal deflection output.

Features

- Fast speed ($t_f=100\text{ns}$ typ).
- High breakdown voltage ($V_{CBO}=1500\text{V}$).
- High reliability (adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit:mm
2022A



Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|------------------------|-------------|------------------|
| Collector-to-Base Voltage | V_{CBO} | | 1500 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 800 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 6 | V |
| Collector Current | I_C | | 10 | A |
| Collector Current (Pulse) | I_{CP} | | 25 | A |
| Collector Dissipation | P_C | $T_c=25^\circ\text{C}$ | 150 | W |
| Junction Temperature | T_j | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|----------------|--|---------|-----|-----|---------------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CES} | $V_{CE}=1500\text{V}, R_{BE}=0$ | | | 1.0 | mA |
| Collector-to-Emitter Sustain Voltage | $V_{CEO(sus)}$ | $I_C=100\text{mA}, I_B=0$ | 800 | | | V |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=4\text{V}, I_C=0$ | | | 1.0 | mA |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=8\text{A}, I_B=2.0\text{A}$ | | | 5 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=8\text{A}, I_B=2.0\text{A}$ | | | 1.5 | V |
| DC Current Gain | h_{FE} | $V_{CE}=5\text{V}, I_C=1.0\text{A}$ | 8 | | | |
| Storage Time | t_{stg} | $I_C=6\text{A}, I_{B1}=1.2\text{A}, I_{B2}=-2.4\text{A}$ | | | 3.0 | μs |
| Fall Time | t_f | $I_C=6\text{A}, I_{B1}=1.2\text{A}, I_{B2}=-2.4\text{A}$ | | 0.1 | 0.2 | μs |

