

**SANYO**

No. 1938A

**2SC3686**

**NPN Triple Diffused Planar Silicon Transistor  
VERY HIGH-DEFINITION CRT DISPLAY  
HORIZONTAL DEFLECTION OUTPUT**

### **Applications**

- . Very high-definition color display horizontal deflection output

## Features

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

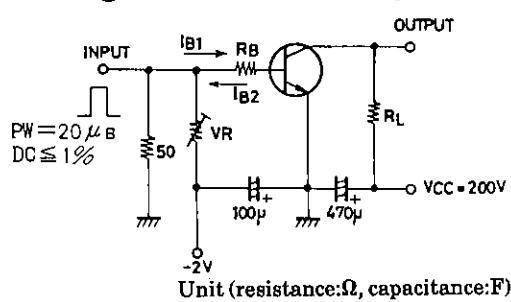
### Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Electrical Ratings at $T_{\text{c}}=25^{\circ}\text{C}$		Unit
Collector-to-Base Voltage	$V_{\text{CBO}}$	1500 V
Collector-to-Emitter Voltage	$V_{\text{CEO}}$	800 V
Emitter-to-Base Voltage	$V_{\text{EBO}}$	6 V
Collector Current	$I_{\text{C}}$	7 A
Peak Collector Current	$i_{\text{cp}}$	16 A
Collector Dissipation	$P_{\text{C}}$	120 W
Junction Temperature	$T_{\text{j}}$	$150^{\circ}\text{C}$
Storage Temperature	$T_{\text{stg}}$	-55 to +150 $^{\circ}\text{C}$

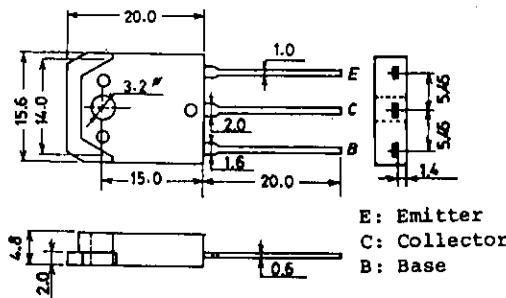
### Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	$I_{CES}$	$V_{CE}=1500V, I_{BE}=0$		1.0		mA
Collector Sustain Voltage	$V_{CEO(SUS)}$	$I_C=100mA, I_B=0$	800			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4V, I_C=0$		1.0		mA
Collector-to-Emitter	$V_{CE(sat)}$	$I_C=5A, I_B=1.2A$		5		V
Saturation Voltage						
Base-to-Emitter	$V_{BE(sat)}$	$I_C=5A, I_B=1.2A$		1.5		V
Saturation Voltage						
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=1.0A$	8			
Storage Time	$t_{stg}$	$I_C=4A, I_{B1}=0.8A,$ $I_{B2}=-1.6A$		3.0		$\mu s$
Fall Time	$t_f$	$I_C=4A, I_{B1}=0.8A,$ $I_{B2}=-1.6A$	0.1	0.2		$\mu s$

## **Switching Time Test Circuit**

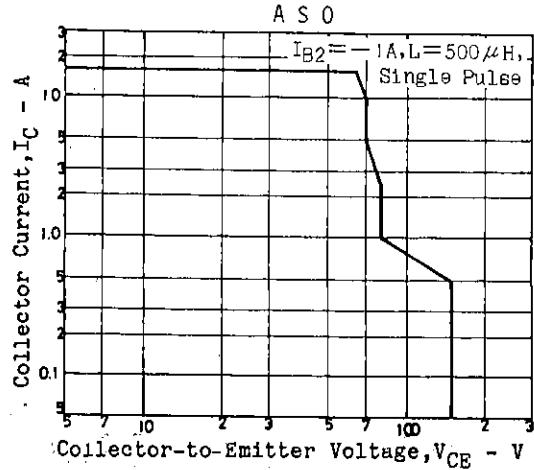
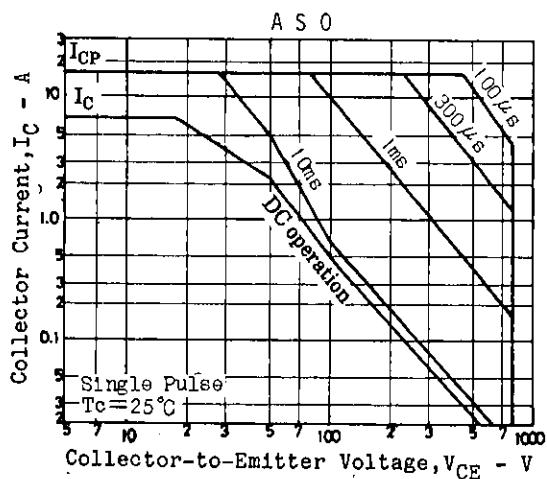
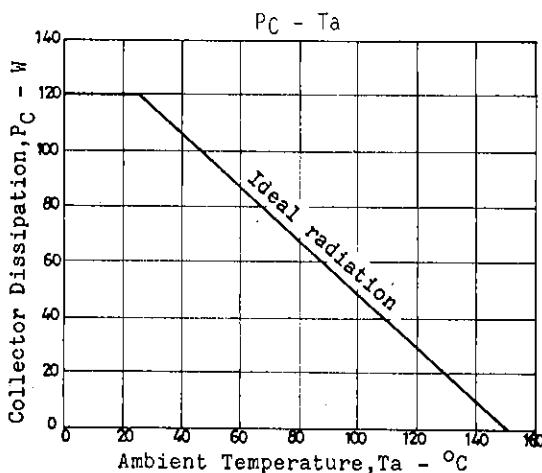
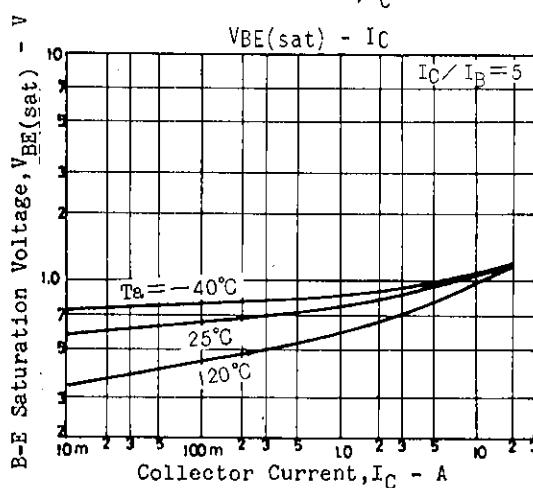
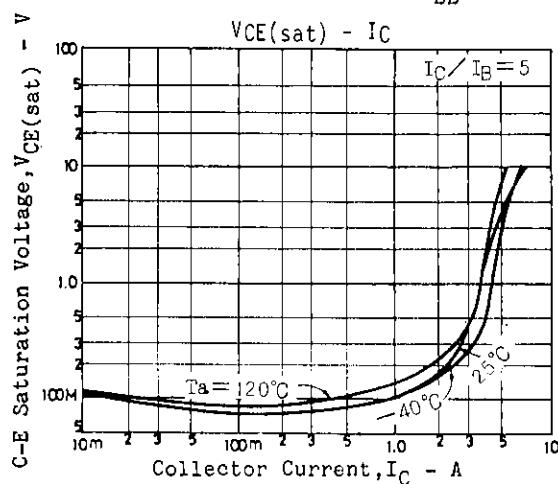
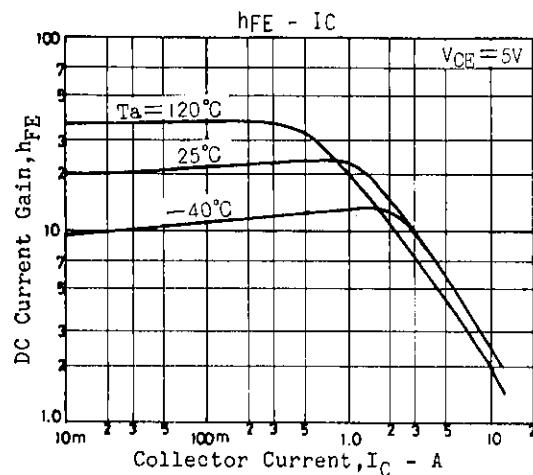
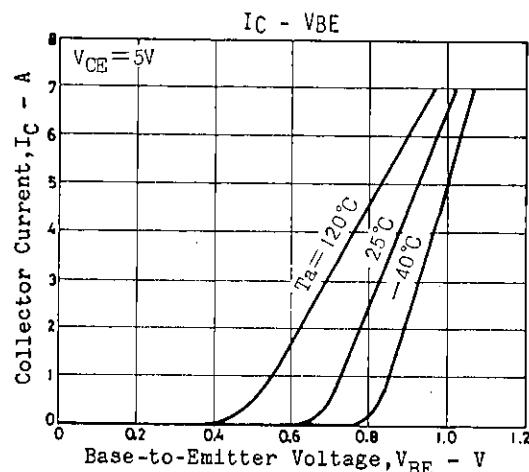
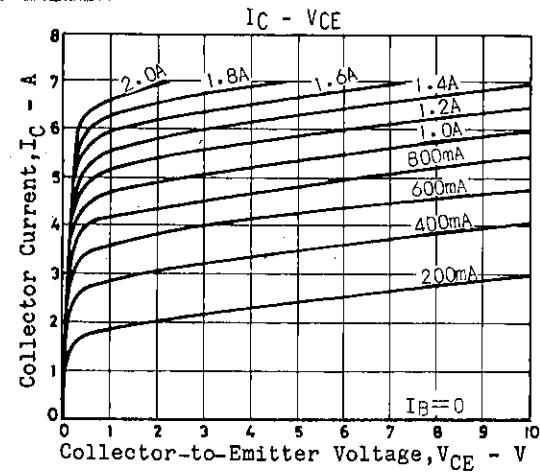


Package Dimensions 2022  
(unit : mm)



SANYO: TO3PB

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