

**SANYO**

No.2956

**2SC4123**

NPN Triple Diffused Planar Silicon Transistor

Very High-Definition Color Display  
Horizontal Deflection Output Applications

**Features**

- High 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
- On-chip damper diode

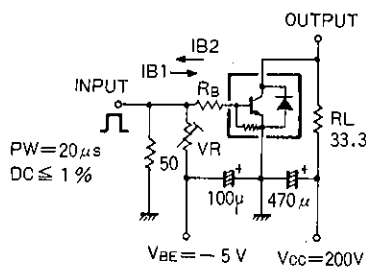
**Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$**

			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	$I_C$	7	A	
Peak Collector Current	$i_{cp}$	16	A	
Collector Dissipation	$P_C$	3	W	
		$T_c=25^\circ\text{C}$	60	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$	

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

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=800\text{V}, I_E=0$			10	$\mu\text{A}$
Collector Cutoff Current	$I_{CES}$	$V_{CE}=1500\text{V}, R_{BE}=0$			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C=100\text{mA}, I_B=0$	800			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$	40		130	mA
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=5\text{A}, I_B=1.2\text{A}$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=5\text{A}, I_B=1.2\text{A}$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1\text{A}$	8			
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=5\text{A}$	4.0		6.0	
Diode Forward Voltage	$V_F$	$I_{EC}=7\text{A}$			2.0	V
Storage Time	$t_{stg}$	$I_C=5\text{A}, I_{B1}=1\text{A}$			3.0	$\mu\text{s}$
Fall Time	$t_f$	$I_{B2}=-2\text{A}$		0.1	0.2	$\mu\text{s}$

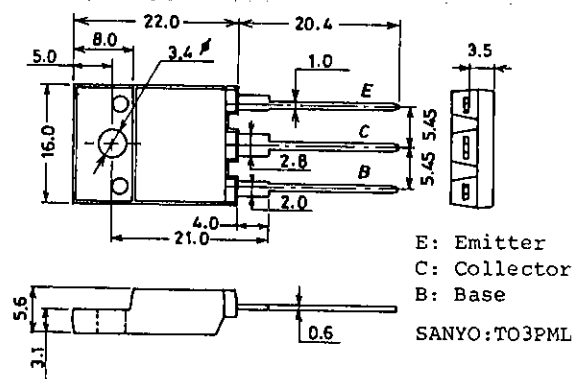
**Switching Time Test Circuit**



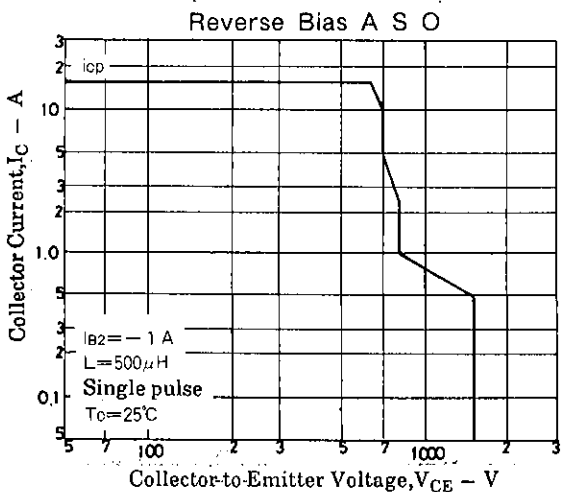
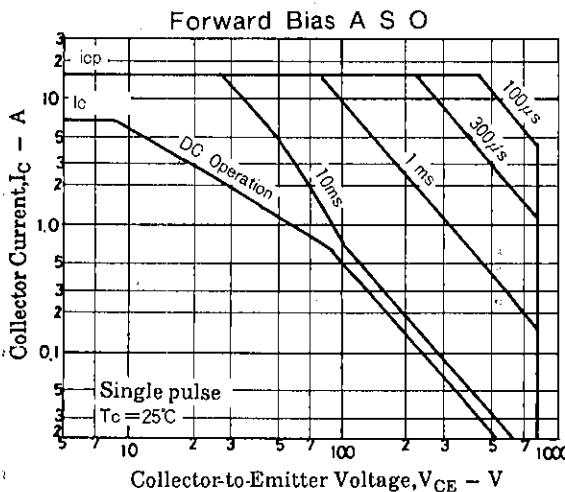
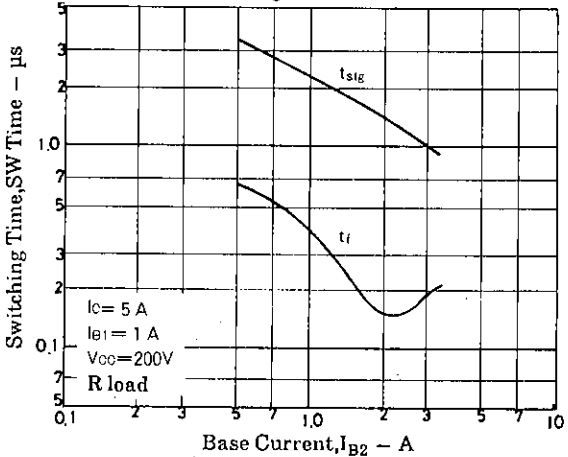
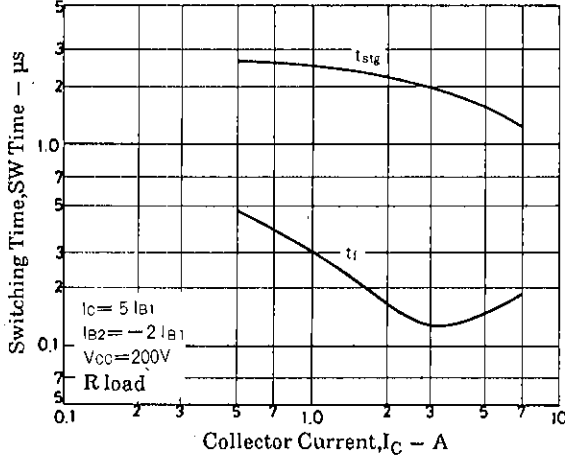
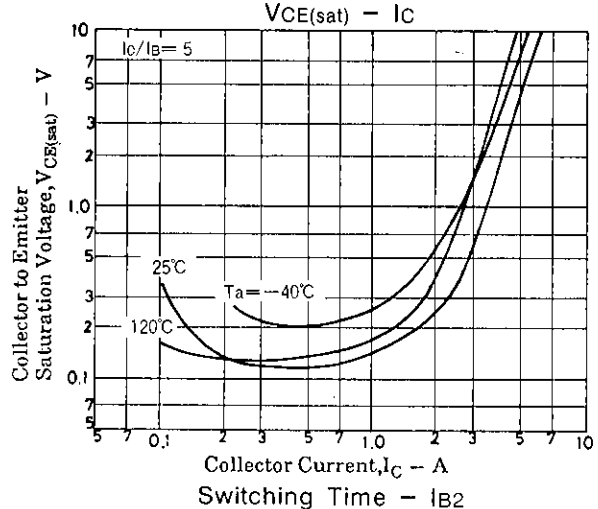
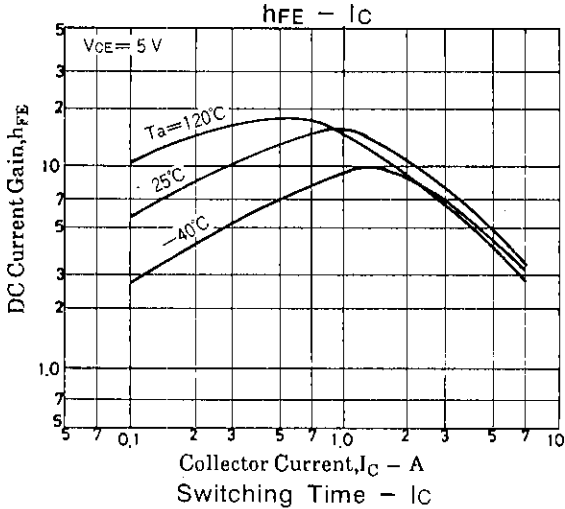
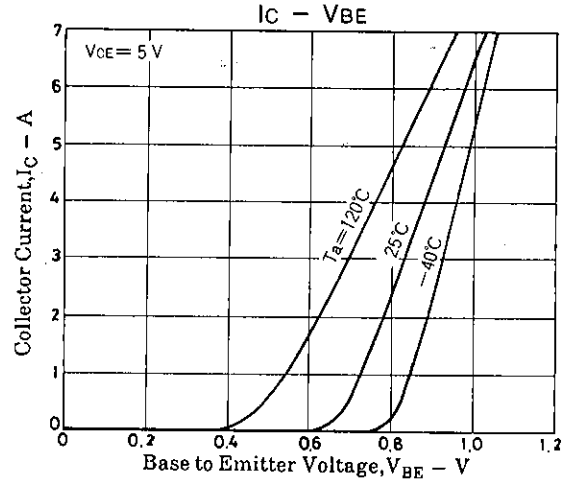
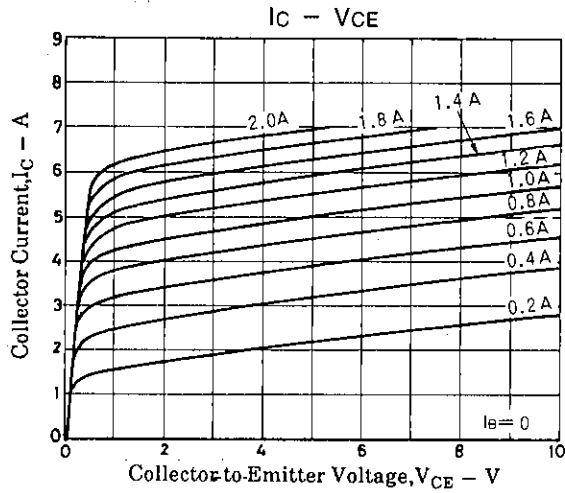
Unit (resistance:Ω, capacitance:F)

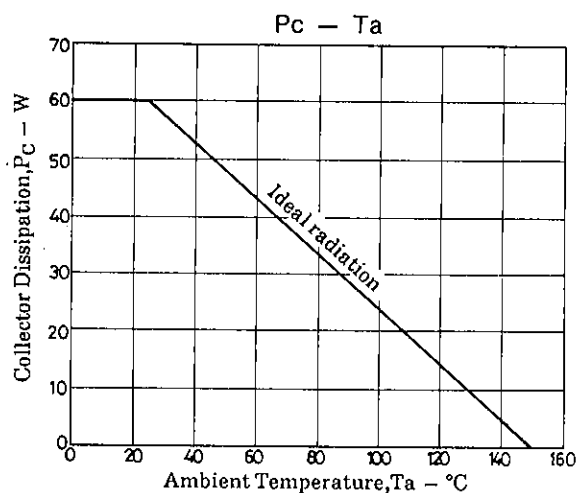
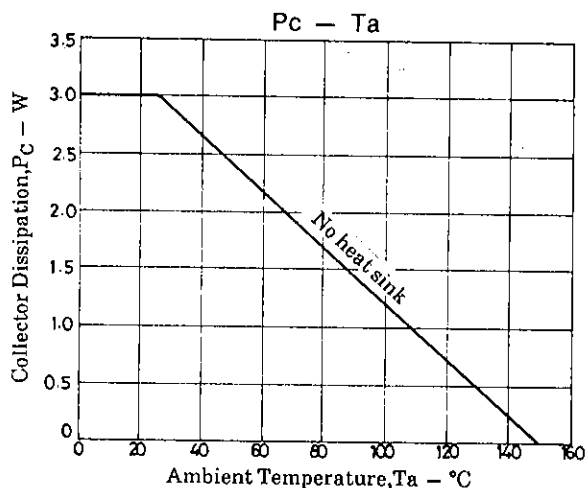
**Package Dimensions 2039**

(unit: mm)



E: Emitter  
C: Collector  
B: Base  
SANYO:TO3PML





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