



No.2962

**2SC4124**

NPN Triple Diffused Planar Silicon Transistor

Very High-Definition Color Display  
Horizontal Deflection Output Applications

**Features**

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

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

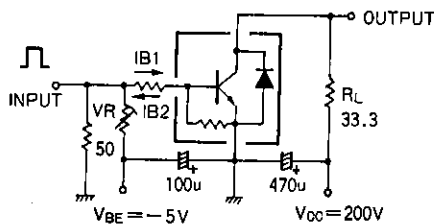
Parameter	Symbol	Value	unit
Collector to Base Voltage	$V_{CBO}$	1500	V
Collector to Emitter Voltage	$V_{CEO}$	800	V
Emitter to Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	8	A
Peak Collector Current	$i_{cp}$	25	A
Collector Dissipation	$P_C$	3	W
$T_c = 25^\circ C$			
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

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

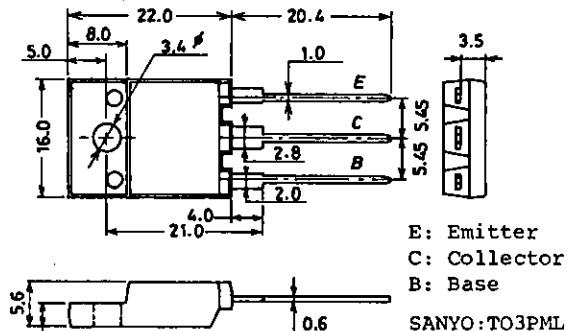
Parameter	Symbol	Test Conditions	min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 800V, I_E = 0$			10	$\mu A$
Collector Cutoff Current	$I_{CES}$	$V_{CE} = 1500V, R_{BE} = 0$			1	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C = 100mA, I_B = 0$	800			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$	40		130	mA
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 6A, I_B = 1.5A$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 6A, I_B = 1.5A$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1A$	8			
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 6A$	4		6	
Diode Forward Voltage	$V_F$	$I_{EC} = 8A$			2	V
Storage Time	$t_{stg}$	$I_C = 6A, I_{B1} = 1.2A$ $I_{B2} = -2.4A$			3	$\mu s$
Fall Time	$t_f$		0.1	0.2		$\mu s$

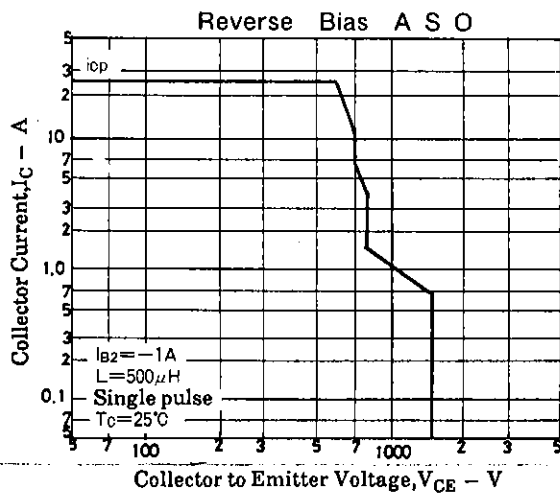
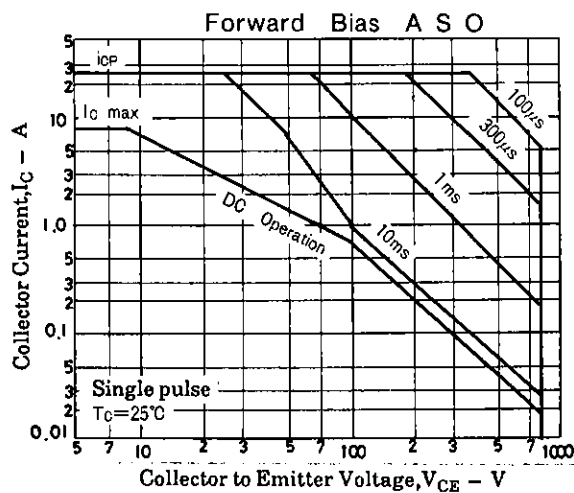
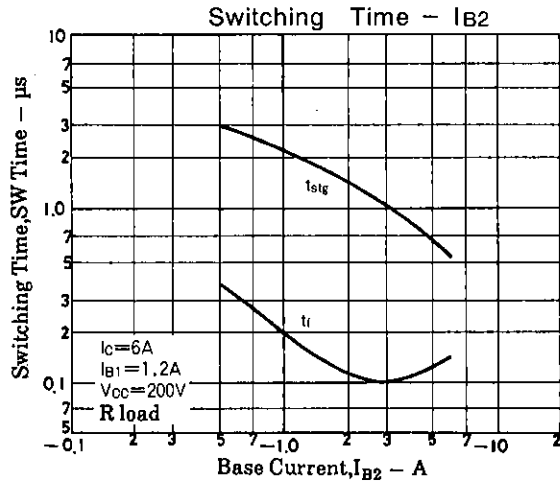
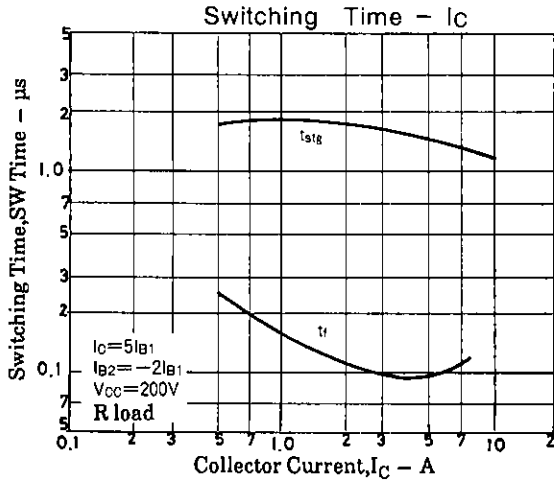
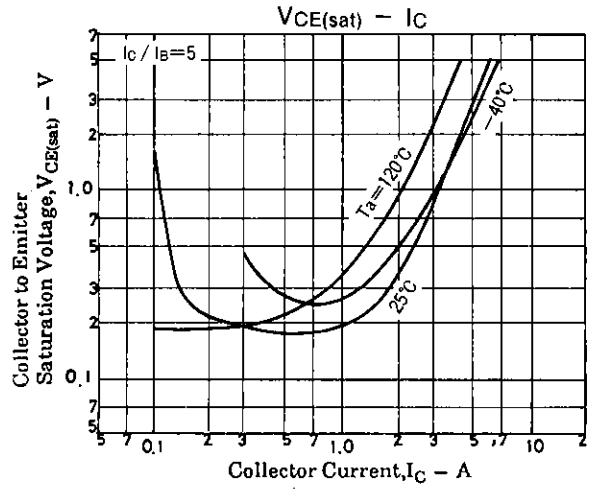
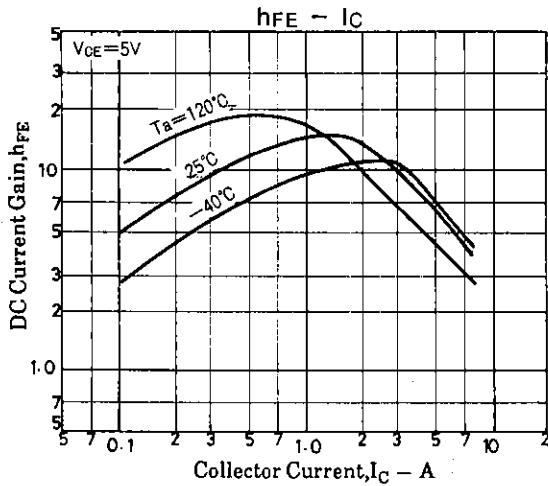
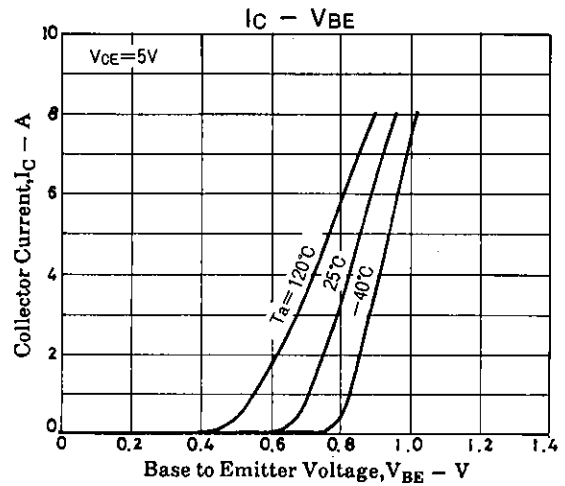
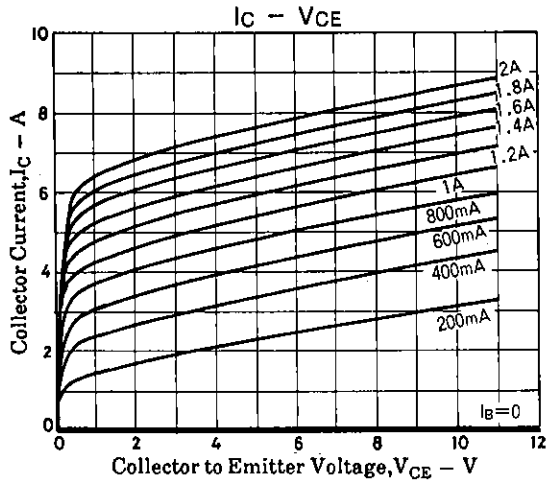
**Switching Time Test Circuit**

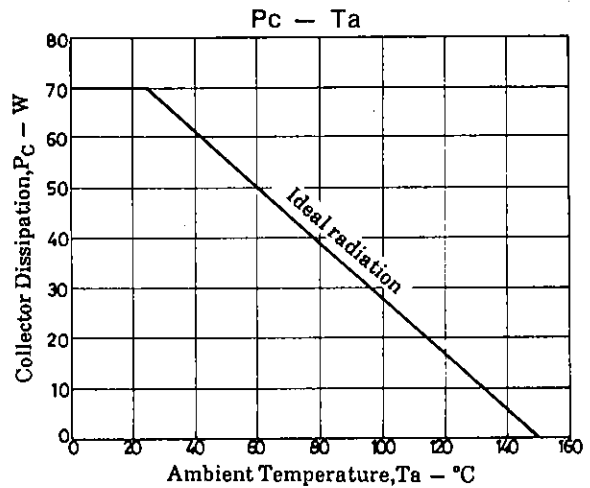
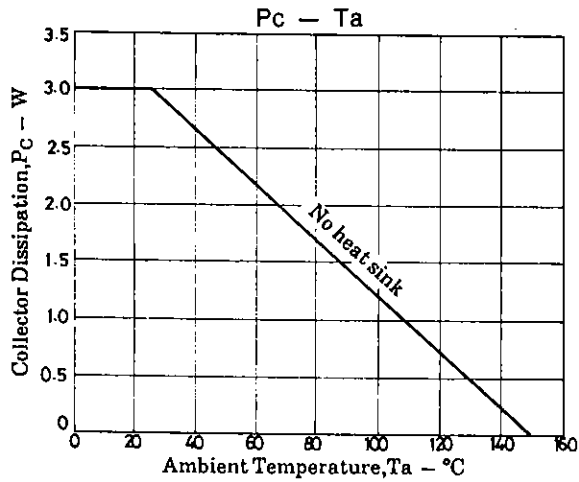
PW=20 $\mu s$   
DC  $\leq 1\%$



**Package Dimensions 2039 (unit: mm)**







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