

<b>SANYO</b>	No.5033	<b>HPA251R</b>
		NPN Triple Diffused Planar Silicon Transistor Very High-Definition Color Display Horizontal Deflection Output Applications

**Features**

- High speed ( $t_f$  typ=100ns).
- High breakdown voltage ( $V_{CBO} = 1500V$ ).
- High-speed damper diode placed in one package ( $t_{fr} = 0.2\mu s$  max).
- Adoption of MBIT process.
- High reliability (adoption of HVP process).

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

			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	$I_C$	25	A
Collector Current (Pulse)	$I_{CP}$	50	A
Diode Forward Current	$I_O$	16	A
Diode Forward Current (Pulse)	$I_{OP}$	25	A
Total Power Dissipation	$P_T$	120	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

$PW \leq 100\mu s, duty \leq 50\%$   
 $T_c = 25^\circ C$

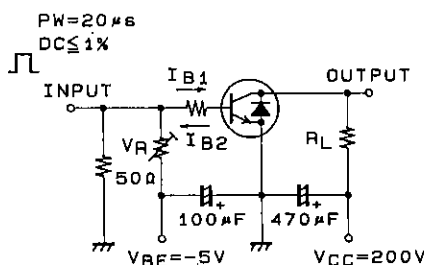
**Electrical Characteristics at  $T_a = 25^\circ C$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 1500V, I_E = 0$			5	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
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 16A, I_B = 4A$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 16A, I_B = 4A$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1.0A$	8			
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 16A$	4*		10*	
Storage Time	$t_{stg}$	$I_C = 12A, I_{B1} = 2.4A, I_{B2} = -4.8A$			3.0	$\mu s$
Fall Time	$t_f$	$I_C = 12A, I_{B1} = 2.4A, I_{B2} = -4.8A$		0.1	0.2	$\mu s$
Diode Forward Voltage	$V_F(1)$	$I_F = 16A$			3	V
	$V_F(2)$	$I_F = 25A$			5	V
Diode Reverse Recovery Time	$t_{rr}$	$I_F = -I_R = 100mA$			1.5	$\mu s$
Diode Forward Recovery Time	$t_{fr}$	$I_F = 100mA$		0.1	0.2	$\mu s$

\* : The HPA251R is classified by 16A  $h_{FE}$  as follows :

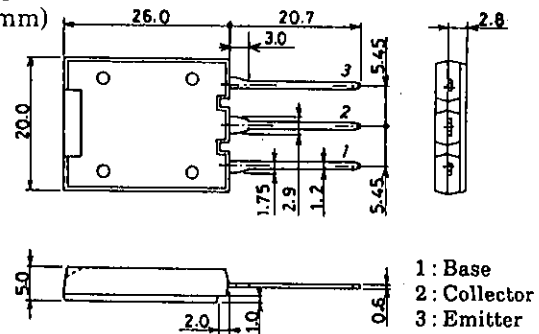
4	2	6	5	3	8	7	4	10
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**Switching Time Test Circuit**



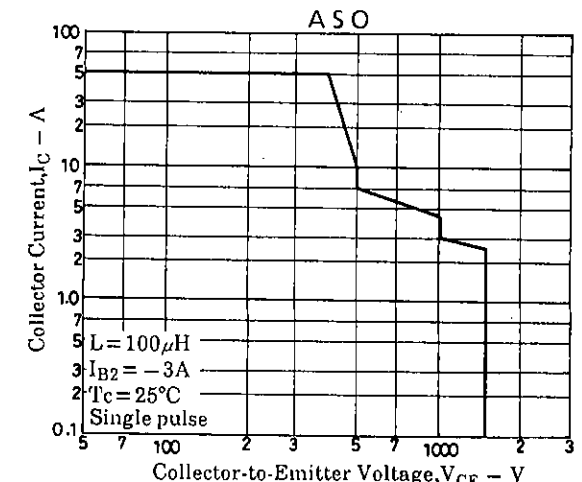
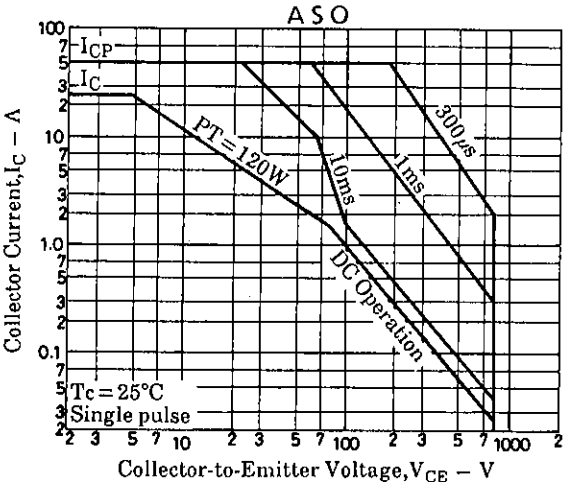
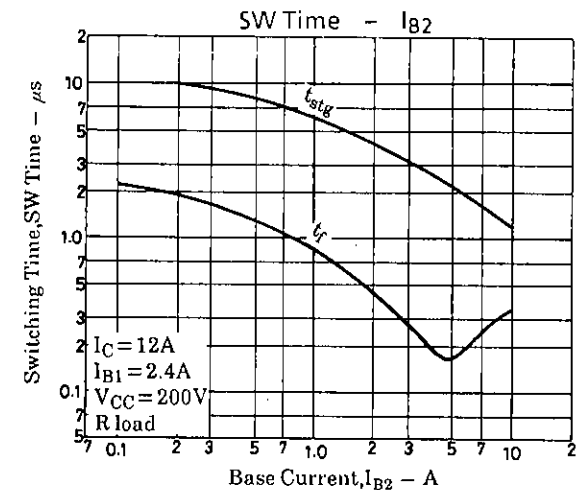
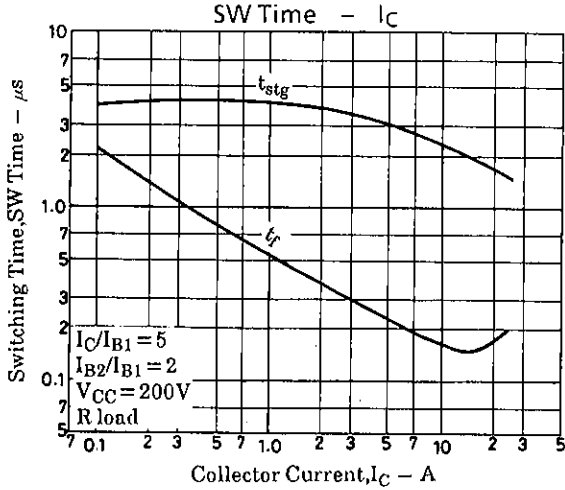
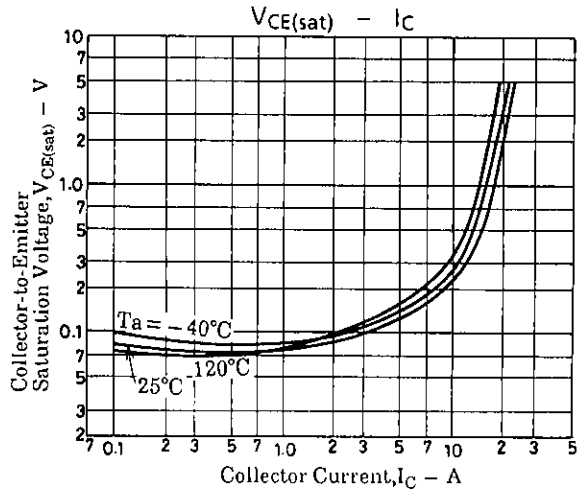
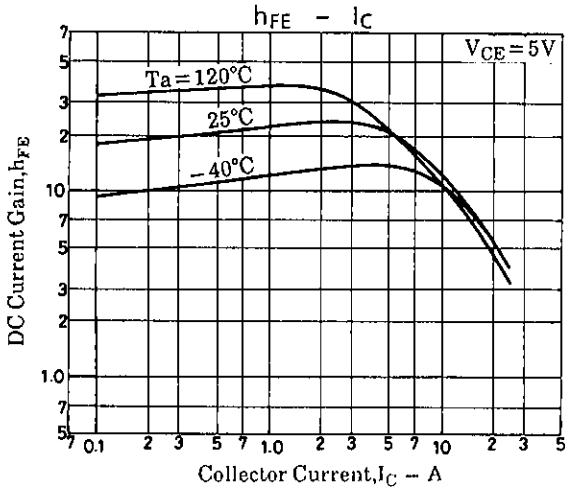
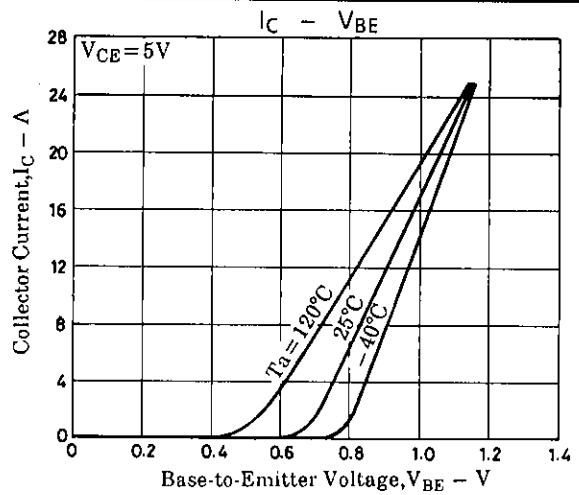
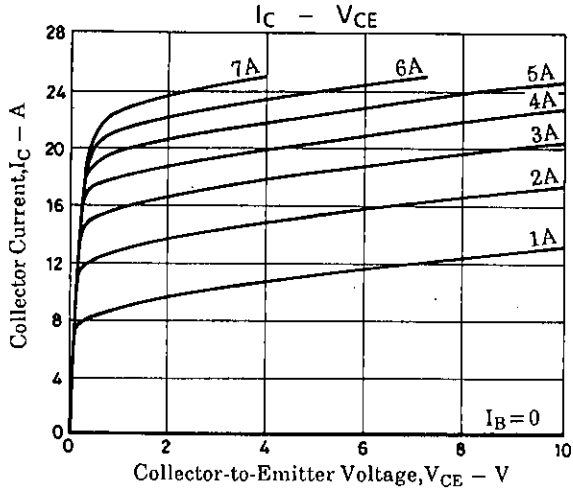
**Package Dimensions 2111A**

(unit : mm)

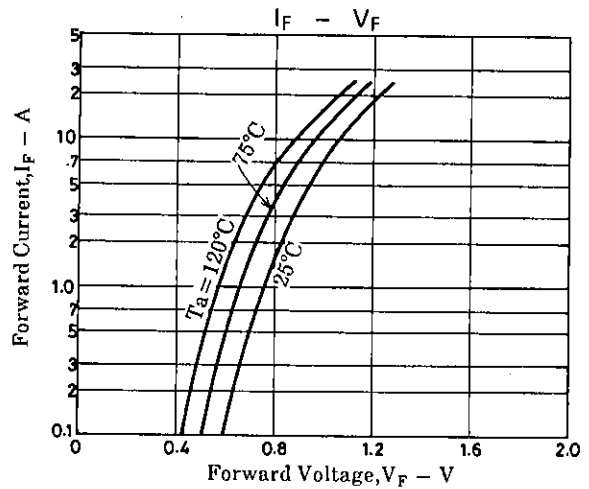
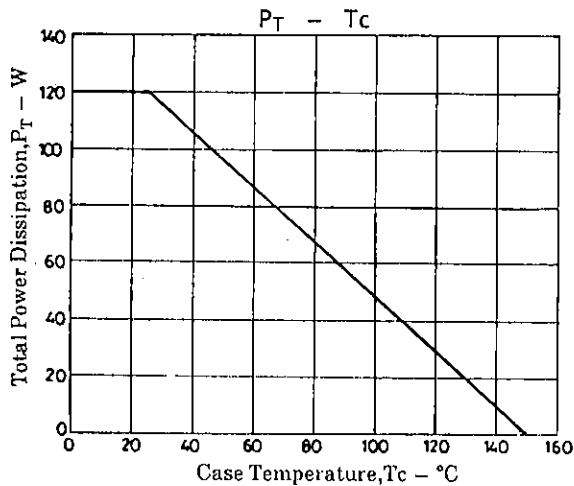


SANYO : TO-3JML

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