

SANYO	No.5033	HPA251R
		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	$^\circ C$

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

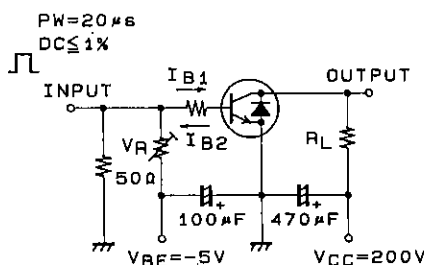
Electrical Characteristics at $T_a = 25^\circ C$

			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	μs
Fall Time	t_f	$I_C = 12A, I_{B1} = 2.4A, I_{B2} = -4.8A$		0.1	0.2	μs
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	μs
Diode Forward Recovery Time	t_{fr}	$I_F = 100mA$		0.1	0.2	μs

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

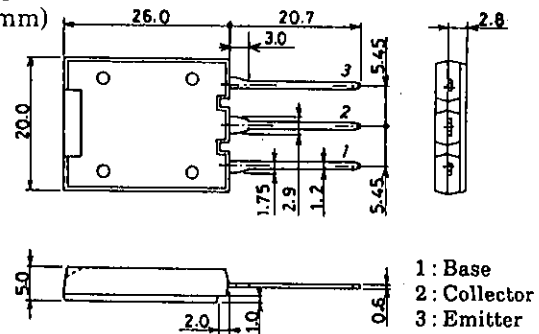
4	2	6	5	3	8	7	4	10
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Switching Time Test Circuit



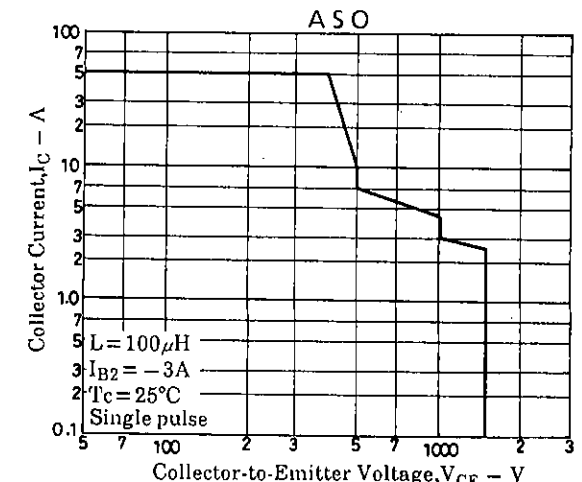
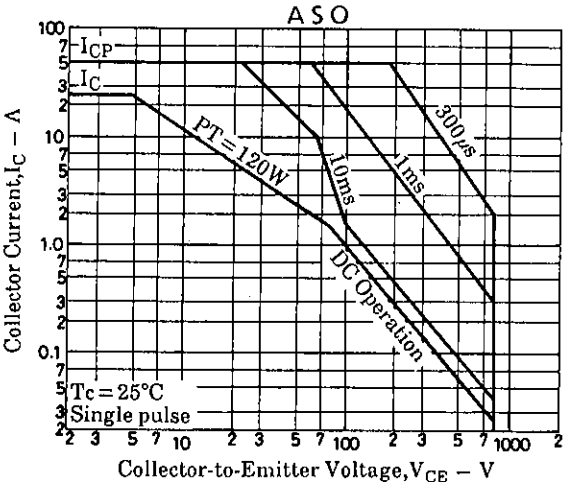
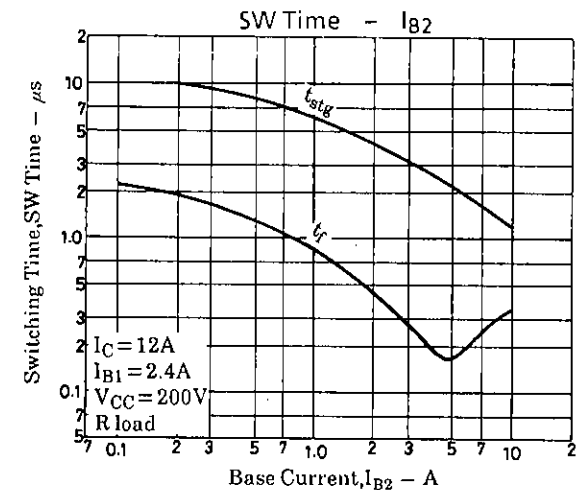
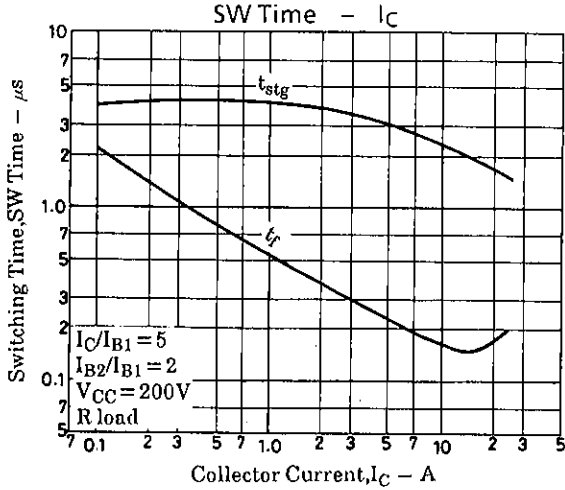
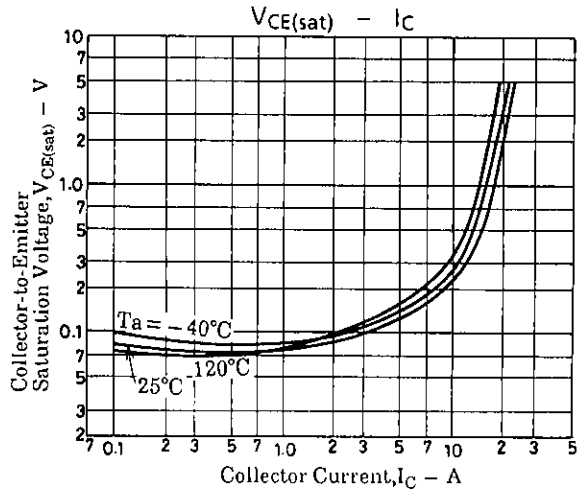
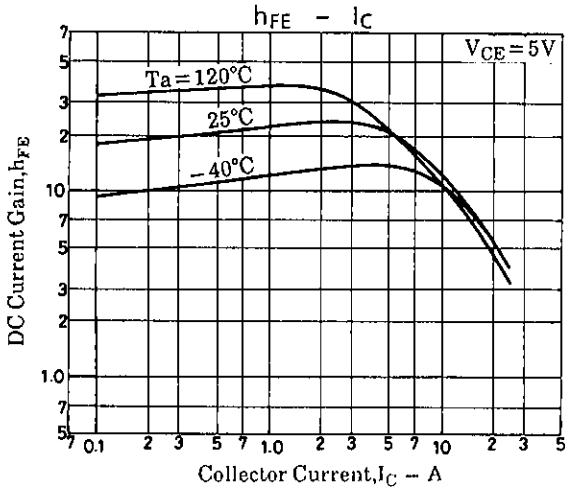
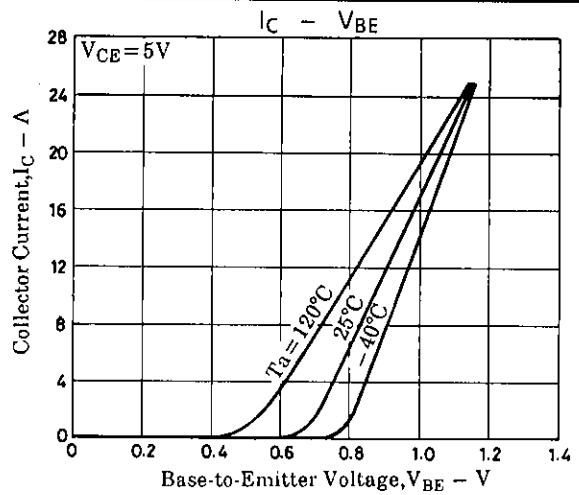
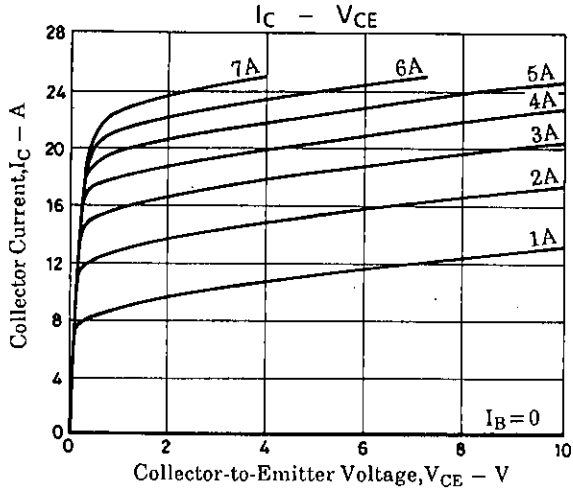
Package Dimensions 2111A

(unit : mm)

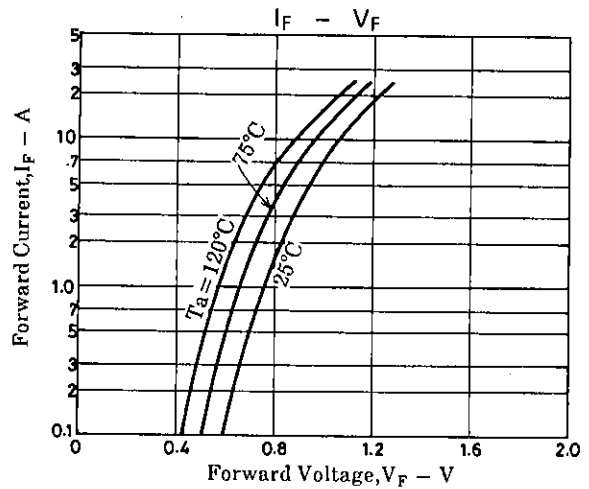
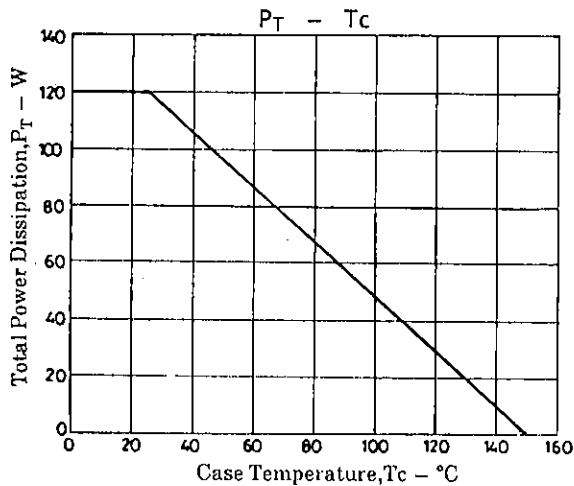


SANYO : TO-3JML

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