

<b>SANYO</b>	No. 2826	<b>HPA100R</b> NPN Triple Diffused Planar Silicon Composite Transistor Very High-Definition Color Display, Horizontal Deflection Output Applications
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**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	$I_C$	10	A
Peak Collector Current	$i_{cp}$	25	A
Diode Forward Current	$I_O$	6	A
Peak Diode Forward Current	$i_{op}$	10	A
Total Power Dissipation	$P_T$	150	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  $T_a = 25^\circ C$**

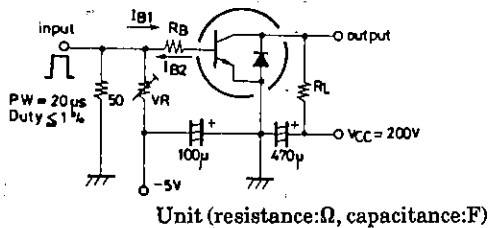
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 1500V, I_E = 0$			5	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C = 100mA, I_B = 0$	800			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$			1.0	mA
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 6A, I_B = 1.5A$			5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 6A, I_B = 1.5A$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1.0A$	8			
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 6.0A$	4*		10*	

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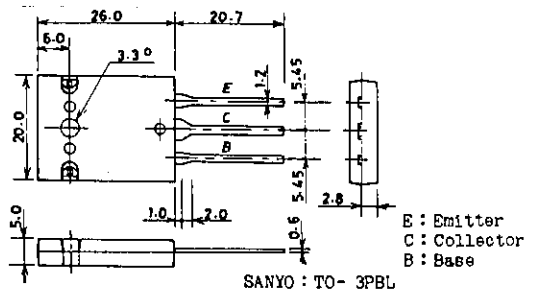
\* The HPA100R is classified by 6A  $h_{FE}$  as follows :

h <sub>FE</sub>	4 to 6	5 to 8	7 to 10
Rank	2	3	4

**Switching Time Test Circuit**



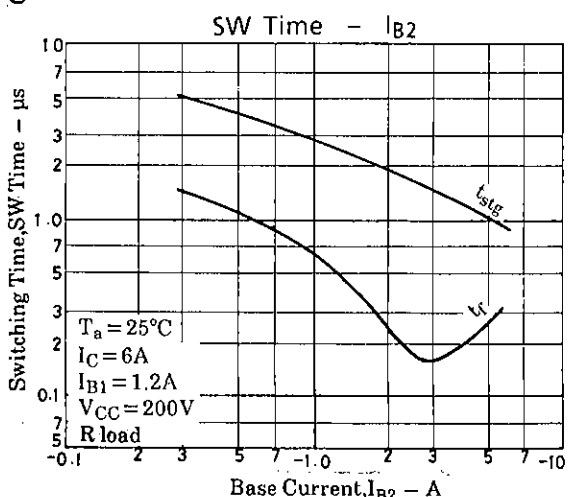
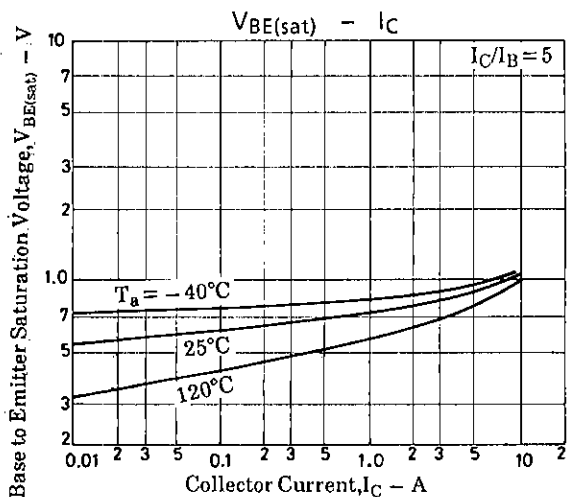
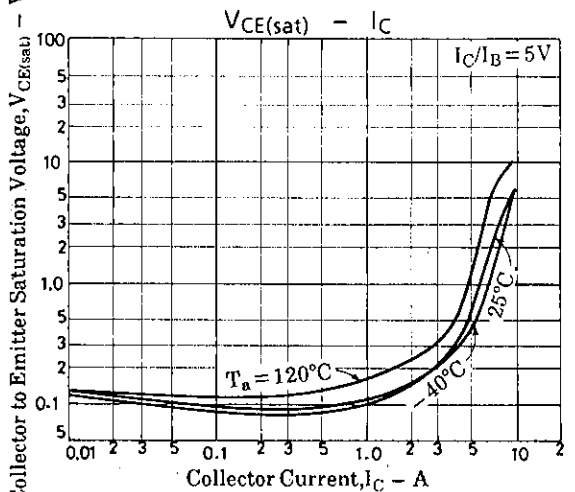
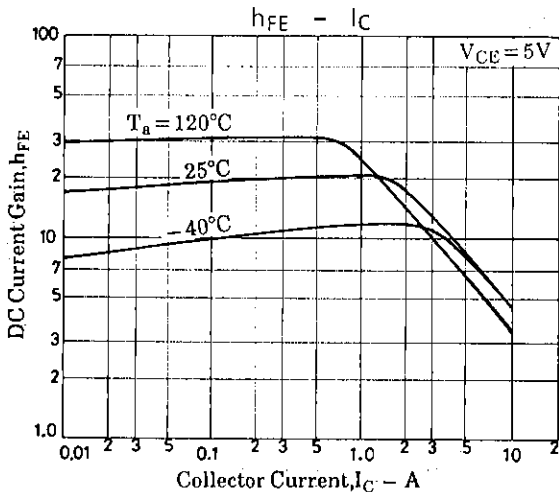
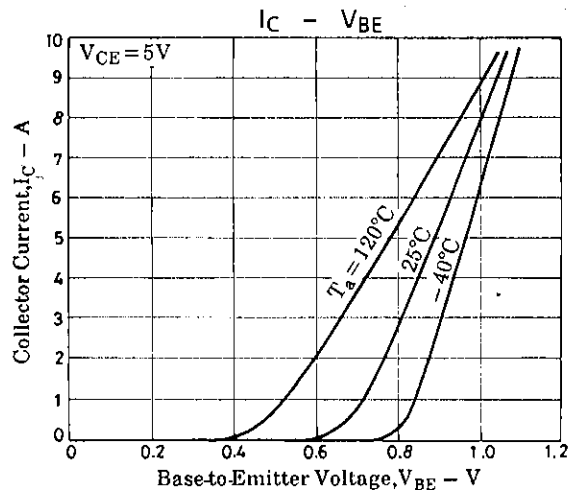
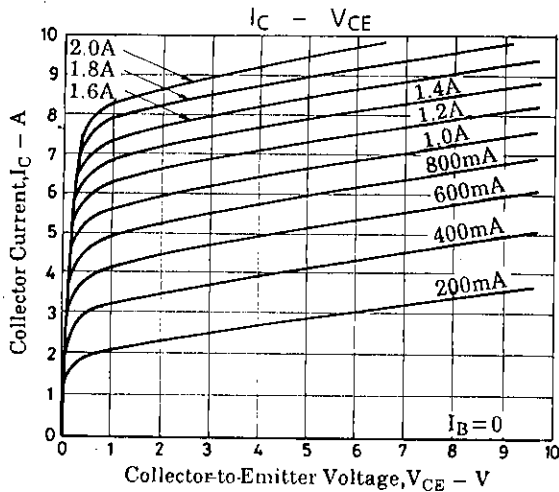
**Package Dimensions 2048  
(unit: mm)**



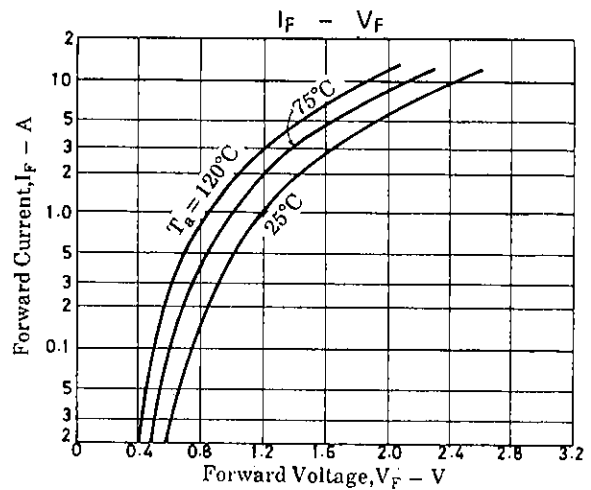
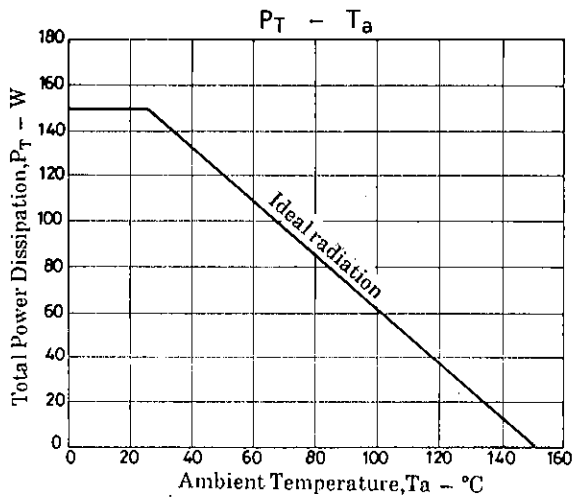
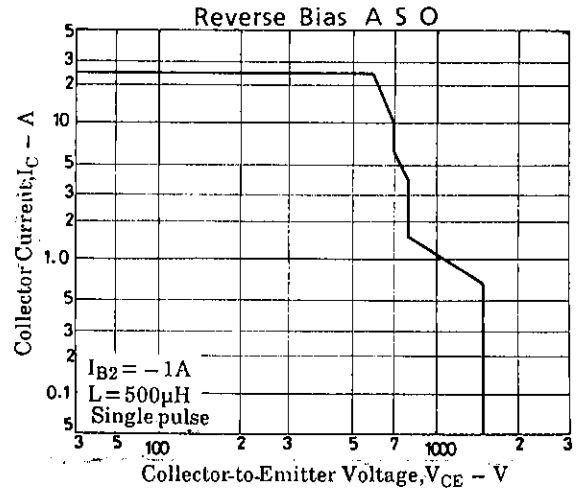
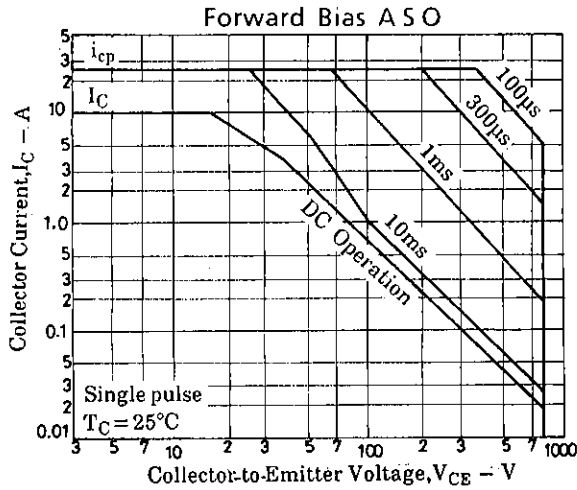
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		$I_C = 6A, I_{B1} = 1.2A, I_{B2} = -2.4A$	min	typ	max	unit
Storage Time	$t_{stg}$	$I_C = 6A, I_{B1} = 1.2A, I_{B2} = -2.4A$			3.0	$\mu s$
Fall Time	$t_f$	$I_C = 6A, I_{B1} = 1.2A, I_{B2} = -2.4A$	0.1	0.2		$\mu s$
Diode Forward Voltage	$V_{F(1)}$	$I_F = 6A$			3	V
	$V_{F(2)}$	$I_F = 10A$			5	V
Diode Reverse Recovery Time	$t_{rr}$	$I_F = -I_R = 100mA$			1	$\mu s$
Diode Forward Recovery Time	$t_{fr}$	$I_F = 100mA$	0.1	0.2		$\mu s$



# HPA100R



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