

SANYO	No. 2827	HPA150R
NPN Triple Diffused Planar Silicon Composite 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	15	A
Peak Collector Current	i_{cp}	35	A
Diode Forward Current	I_O	10	A
Peak Diode Forward Current	i_{op}	$PW \leq 100\mu s, duty \leq 50\%$	A
Total Power Dissipation	P_T	$T_c = 25^\circ C$	180 W
Junction Temperature	T_j		150 $^\circ C$
Storage Temperature	T_{stg}		- 55 to + 150 $^\circ C$

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

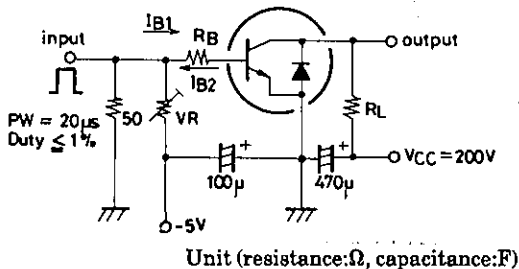
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 1500V, I_E = 0$			5	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C = 100mA, I_B = 0$	800			V
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4V, I_C = 0$			1.0	mA
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10A, I_B = 2.5A$			5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10A, I_B = 2.5A$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1.0A$	8			
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 10A$	4*		10*	

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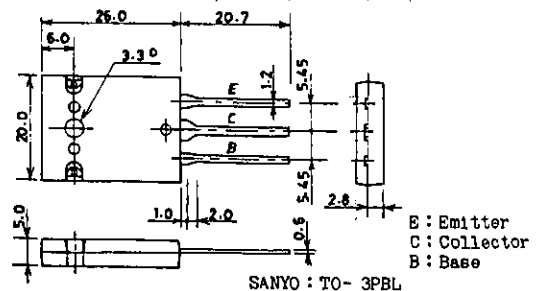
* The HPA150R is classified by 10A h_{FE} as follows:

h _{FE}	4 to 6	5 to 8	7 to 10
Rank	2	3	4

Switching Time Test Circuit



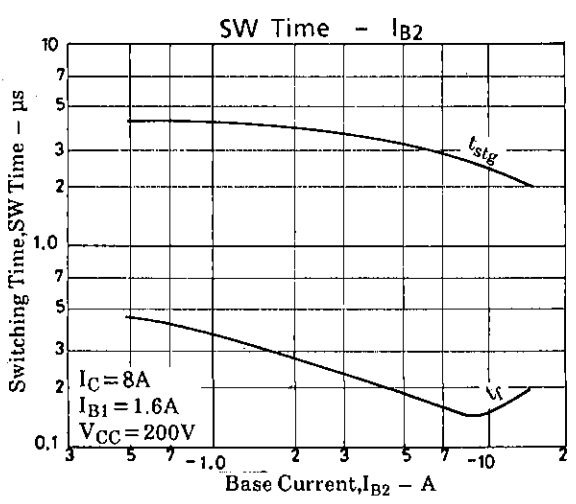
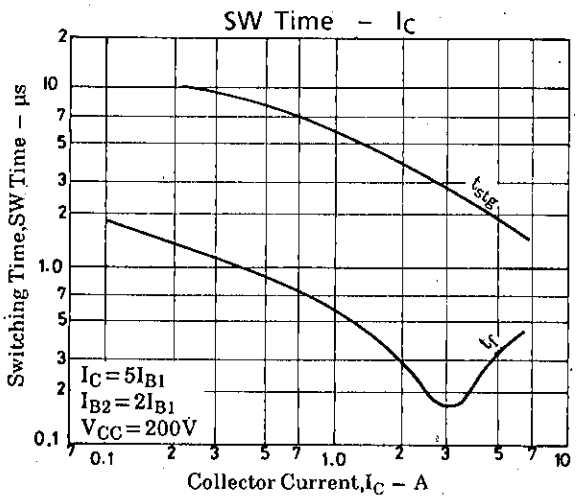
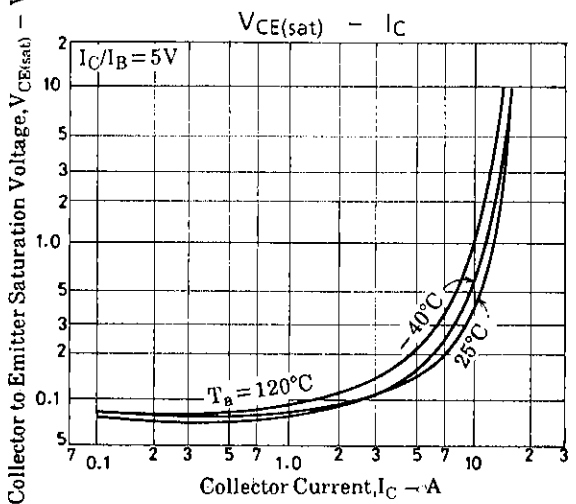
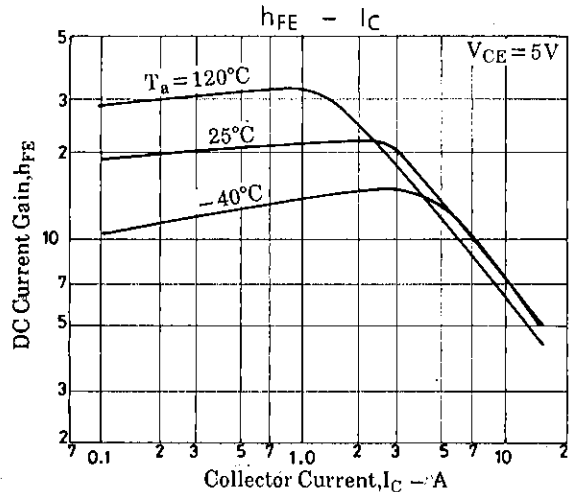
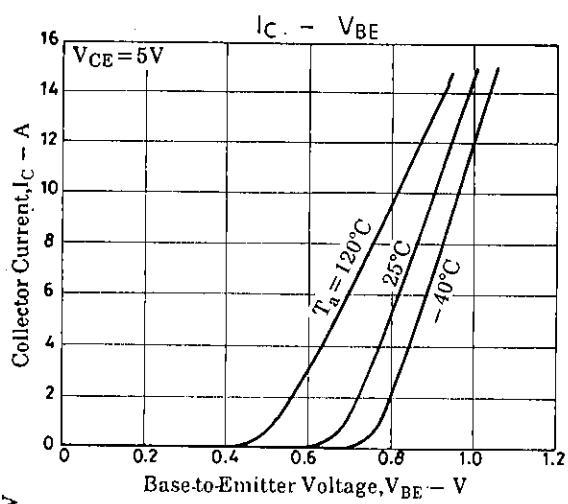
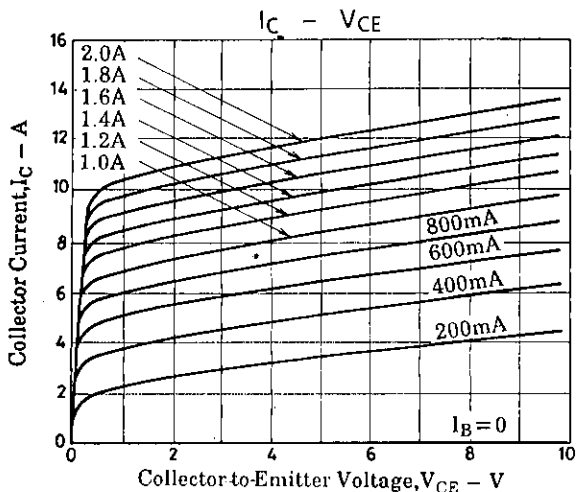
Package Dimensions 2048
(unit: mm)



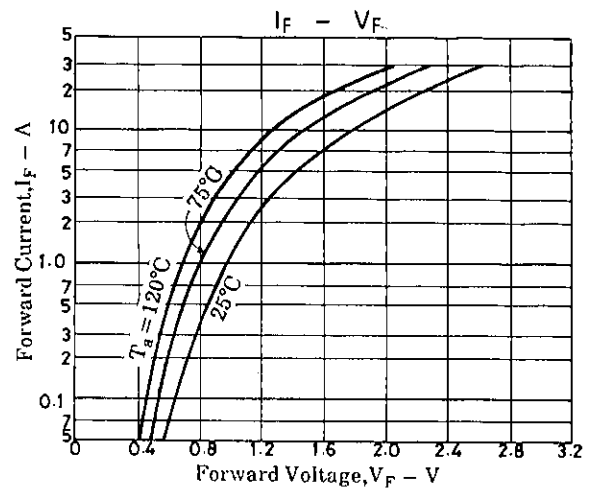
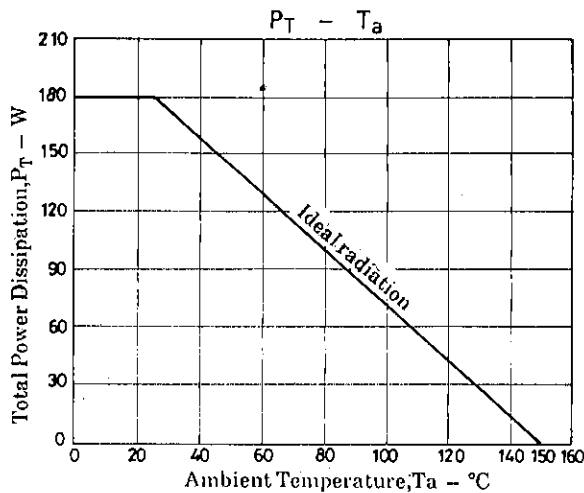
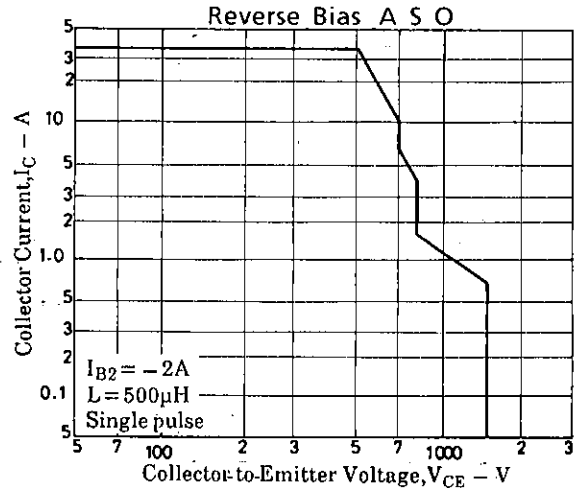
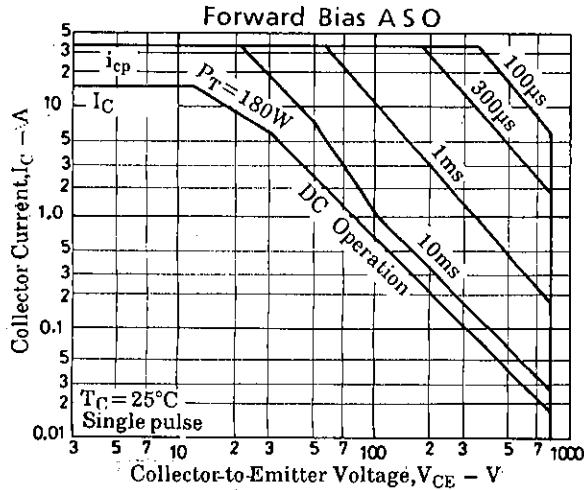
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			min	typ	max	unit
Storage Time	t_{stg}	$I_C = 8A, I_{B1} = 1.6A, I_{B2} = -3.2A$			3.0	μs
Fall Time	t_f	$I_C = 8A, I_{B1} = 1.6A, I_{B2} = -3.2A$		0.1	0.2	μs
Diode Forward Voltage	$V_{F(1)}$	$I_F = 10A$			3	V
	$V_{F(2)}$	$I_F = 15A$			5	V
Diode Reverse Recovery Time	t_{rr}	$I_F = -I_R = 100mA$			1	μs
Diode Forward Recovery Time	t_{fr}	$I_F = 100mA$	0.1	0.2		μs



HPA150R



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