

<b>SANYO</b>	No.2114B	<b>2SB1205</b>
		PNP Epitaxial Planar Silicon Transistor Strobe High-Current Switching Applications

**Applications**

- . Strobe, voltage regulators, relay drivers, lamp drivers.

**Features**

- . Adoption of FBET, MBIT processes.
- . Low saturation voltage.
- . Fast switching speed.
- . Large current capacity.
- . Small and slim package making it easy to make 2SB1205-applied sets smaller.

**Absolute Maximum Ratings at Ta=25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	-25	V
Collector to Emitter Voltage	V <sub>CE0</sub>	-20	V
Emitter to Base Voltage	V <sub>EB0</sub>	-5	V
Collector Current	I <sub>C</sub>	-5	A
Collector Current(Pulse)	I <sub>CP</sub>	-8	A
Base Current	I <sub>B</sub>	-0.5	A
Collector Dissipation	P <sub>C</sub>	1	W
		10	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

Tc=25°C

**Electrical Characteristics at Ta=25°C**

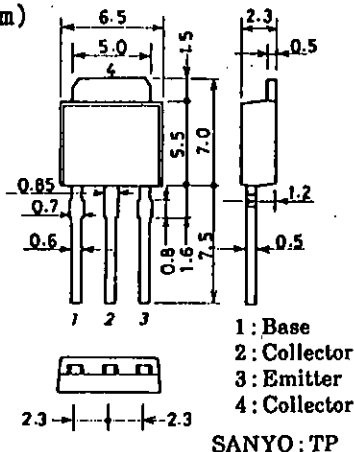
			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =-20V, I <sub>E</sub> =0			-500	nA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0			-500	nA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =-2V, I <sub>C</sub> =500mA	100*		400*	
	h <sub>FE</sub> (2)	V <sub>CE</sub> =-2V, I <sub>C</sub> =-4A	60			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-200mA		320		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CE</sub> =-10V, f=1MHz		60		pF

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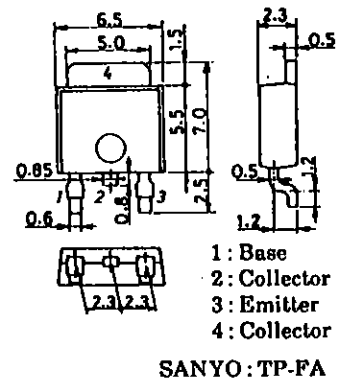
\* The 2SB1205 is classified by 500mA h<sub>FE</sub> as follows:

100	R	200	140	S	280	200	T	400
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**Package Dimensions 2045B (unit:mm)**



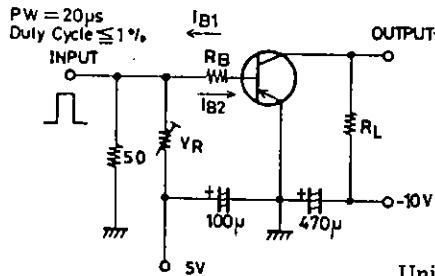
**Package Dimensions 2044B (unit:mm)**



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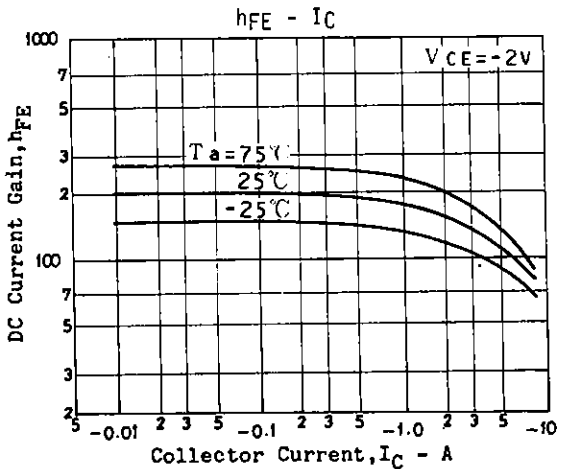
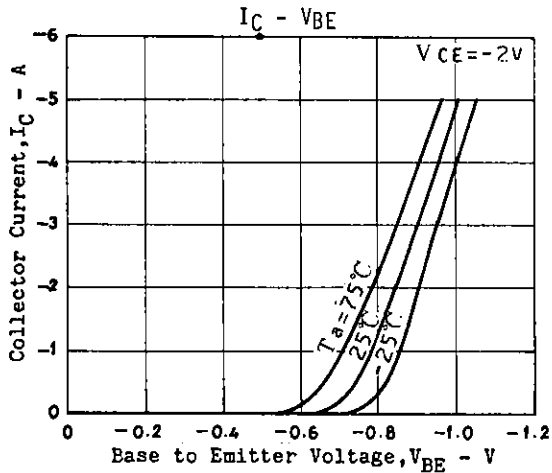
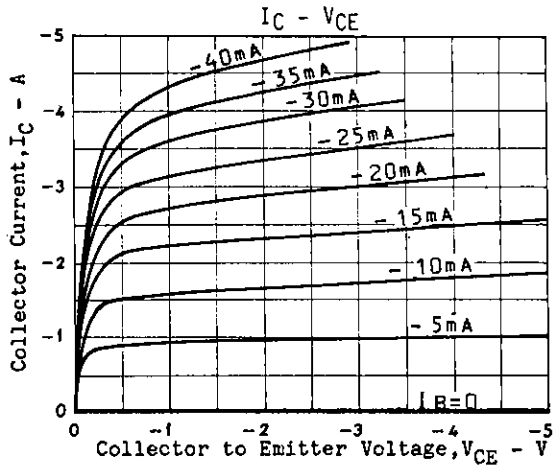
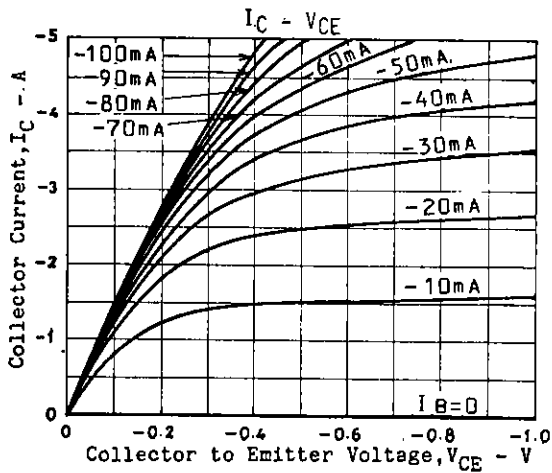
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -3A, I_B = -60mA$		-250	-500	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -3A, I_B = -60mA$		-1.0	-1.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Turn-ON Time	$t_{on}$	See specified Test Circuit.		40		ns
Storage Time	$t_{stg}$	"		200		ns
Fall Time	$t_f$	"		10		ns

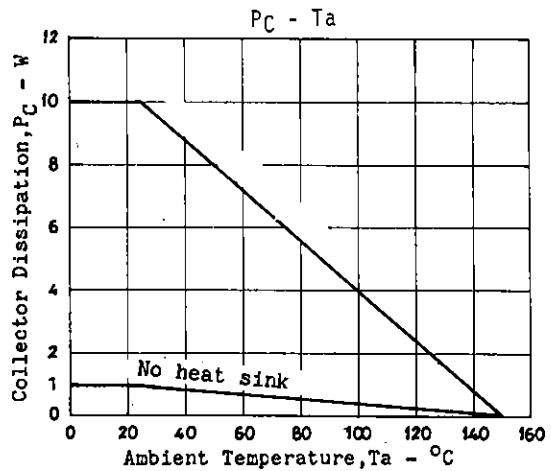
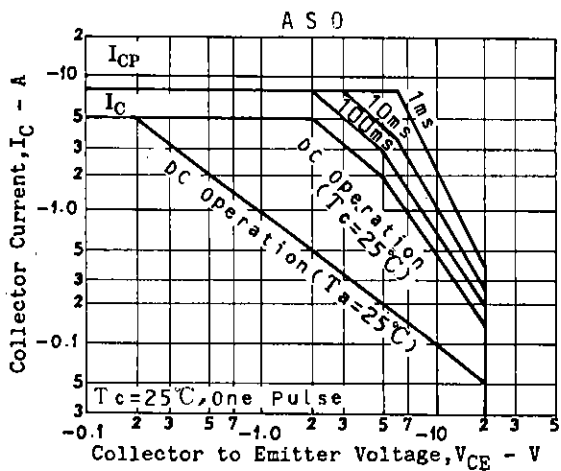
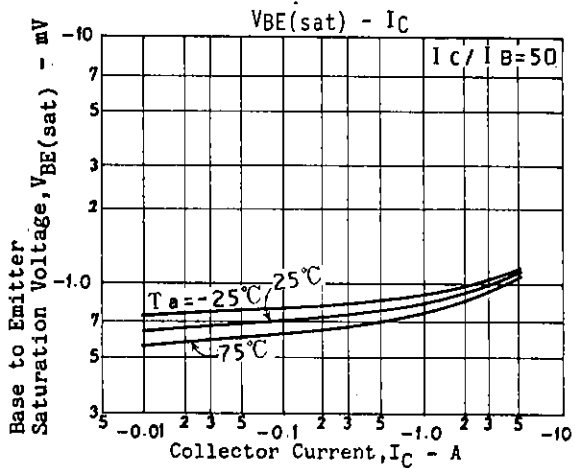
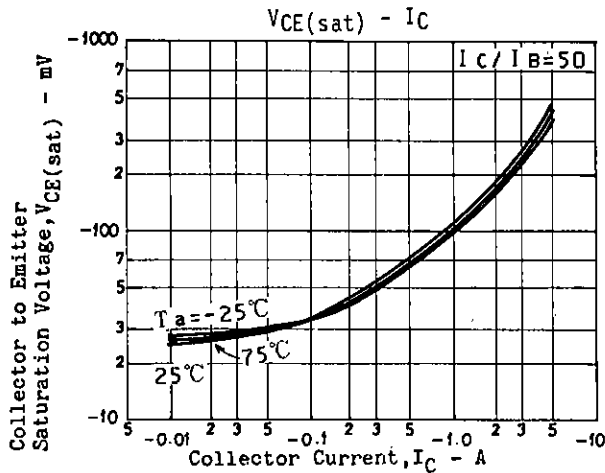
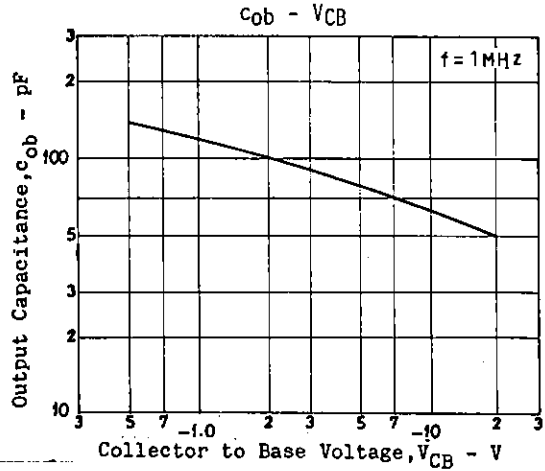
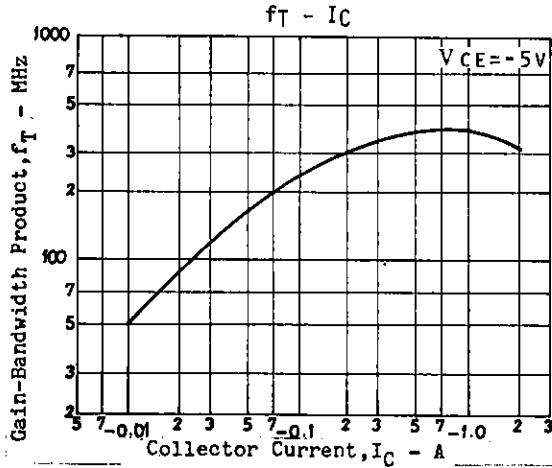
Switching Time Test Circuit



$I_C = -10 \quad I_{B1} = 10 \quad I_{B2} = -2A$

Unit (Resistance :  $\Omega$ , Capacitance : F)





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