

<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**

Collector to Base Voltage	$V_{CB0}$	-25	V	
Collector to Emitter Voltage	$V_{CE0}$	-20	V	
Emitter to Base Voltage	$V_{EB0}$	-5	V	
Collector Current	$I_C$	-5	A	
Collector Current(Pulse)	$I_{CP}$	-8	A	
Base Current	$I_B$	-0.5	A	
Collector Dissipation	$P_C$	1	W	
		10	W	$T_c=25^\circ C$
Junction Temperature	$T_j$	150	°C	
Storage Temperature	$T_{stg}$	-55 to +150	°C	

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

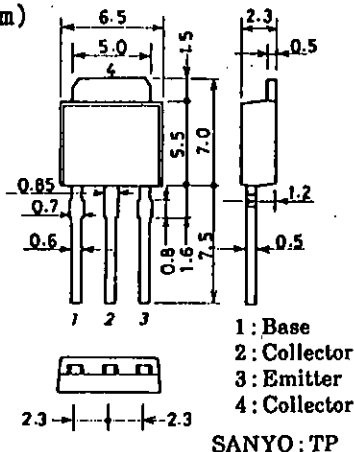
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=-20V, I_E=0$			-500	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-4V, I_C=0$			-500	nA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=-2V, I_C=500mA$	100*		400*	
	$h_{FE}(2)$	$V_{CE}=-2V, I_C=-4A$	60			
Gain-Bandwidth Product	$f_T$	$V_{CE}=-5V, I_C=-200mA$		320		MHz
Output Capacitance	$c_{ob}$	$V_{CE}=-10V, f=1MHz$		60		pF

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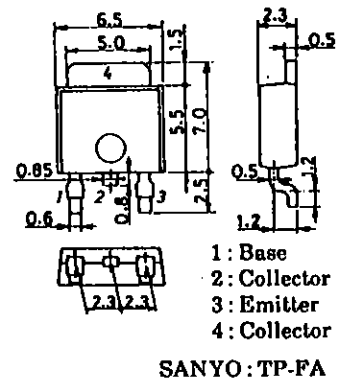
\* The 2SB1205 is classified by 500mA  $h_{FE}$  as follows:

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



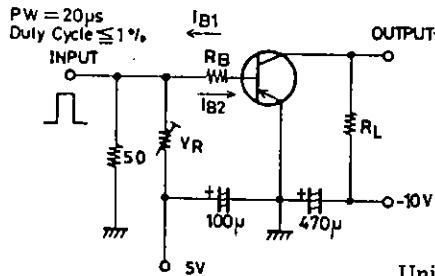
**Package Dimensions 2044B (unit:mm)**



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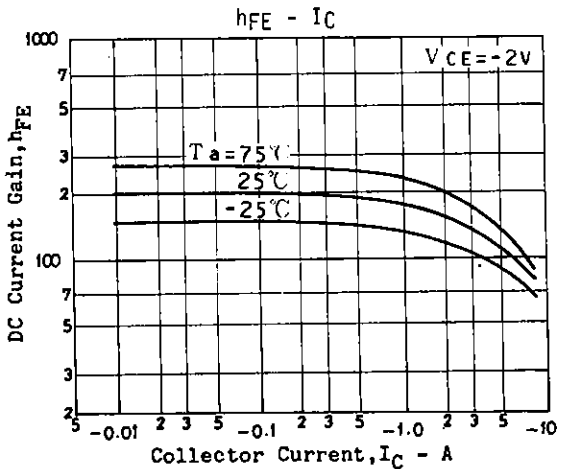
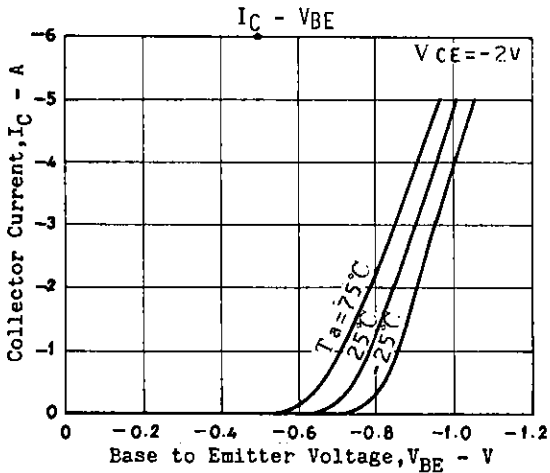
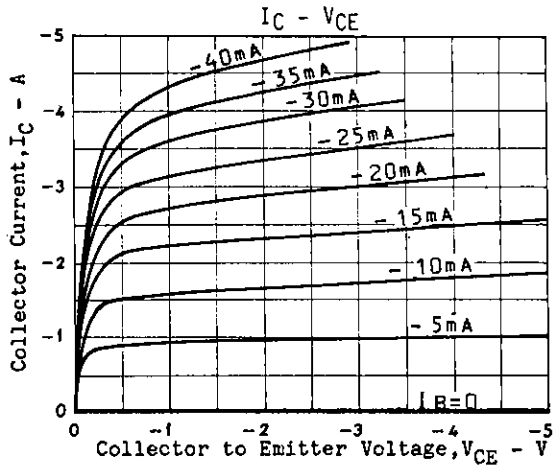
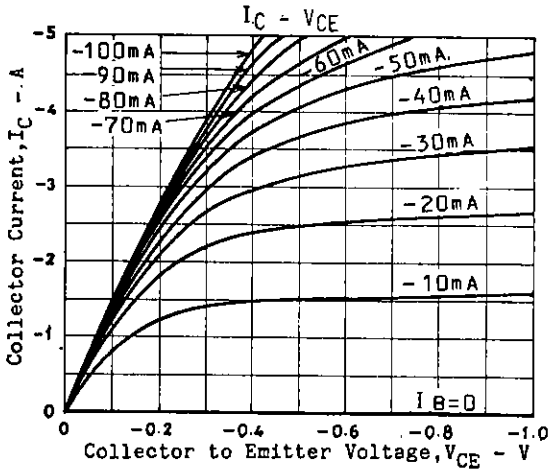
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -3A, I_B = -60mA$		-250	-500	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -3A, I_B = -60mA$		-1.0	-1.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-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

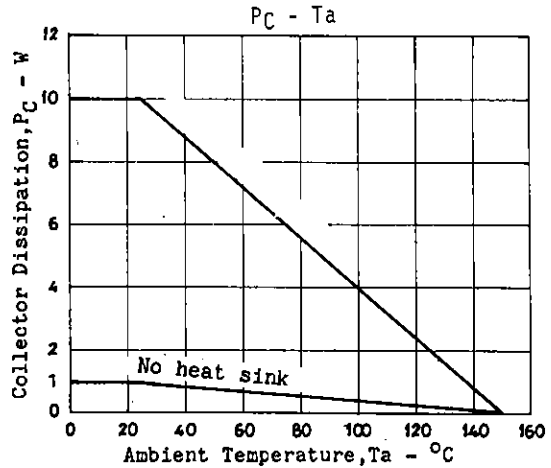
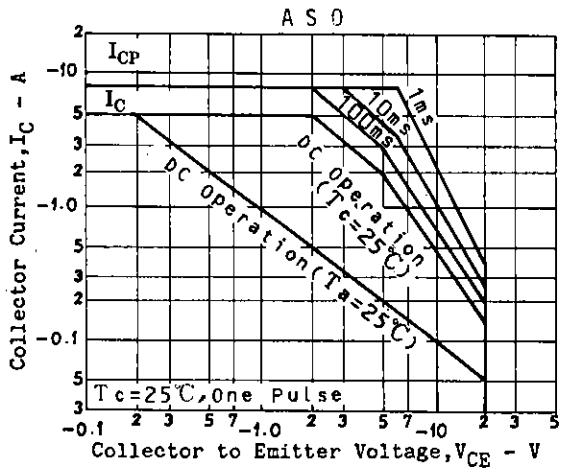
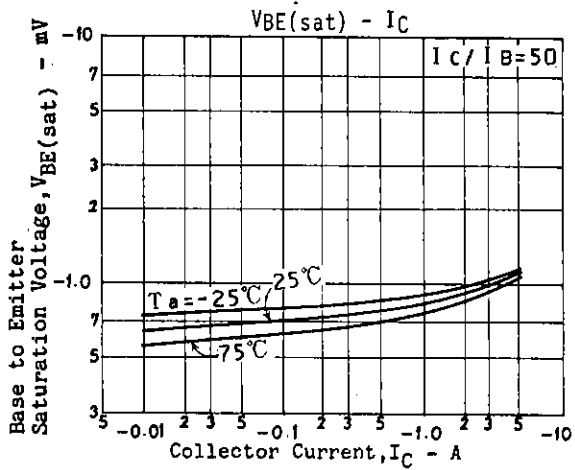
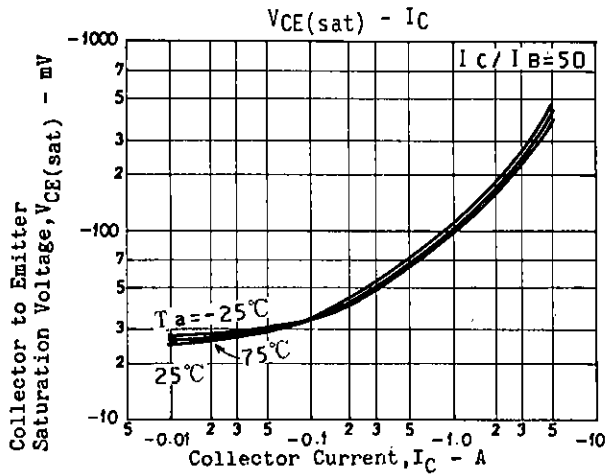
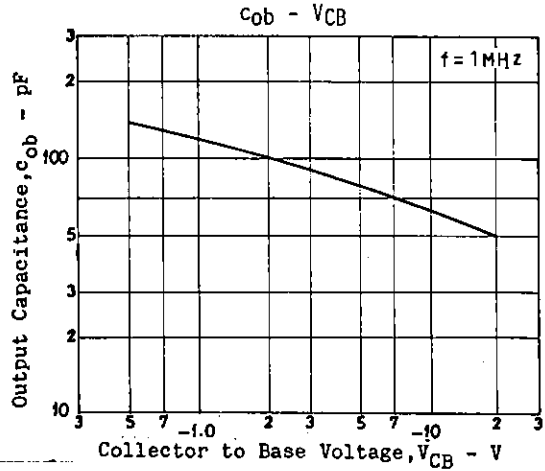
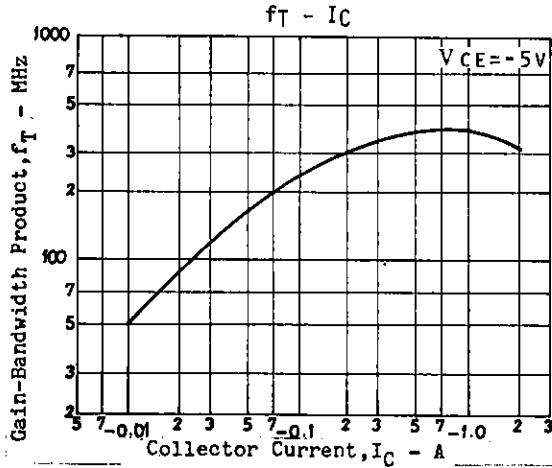
Switching Time Test Circuit



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

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





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