Ordering number: EN 2114B

SANYO

No.2114B

2SB1205

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_{CBO}		-25	V
Collector to Emitter Voltage	V_{CEO}		-20	V
Emitter to Base Voltage	V_{EBO}		-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
		Tc=25°C	10	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
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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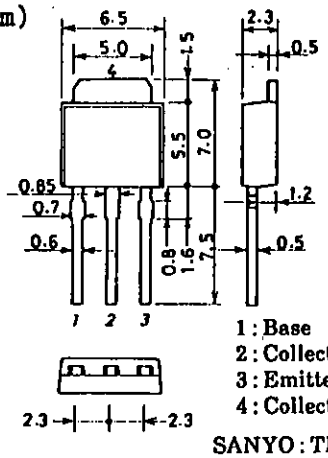
* The 2SB1205 is classified by 500mA h_{FE} as follows:

100 R 200	140 S 280	200 T 400

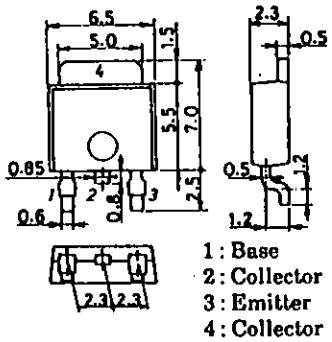
Package Dimensions 2045B
(unit:mm)



1 : Base
2 : Collector
3 : Emitter
4 : Collector

SANYO : TP

Pckage Dimensions 2044B
(unit:mm)



1 : Base
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SANYO : TP-FA

SANYO Electric Co.,Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

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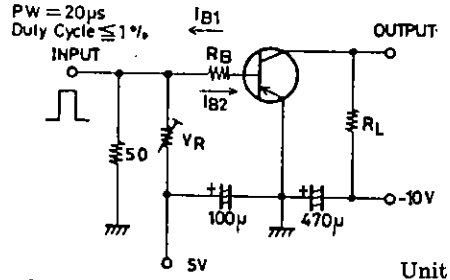
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=-3A, I_B=-60mA		-250	-500	mV
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=-3A, I_B=-60mA		-1.0	-1.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=-10μA, I_E=0	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=-1mA, R_{BE}=∞	-20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10μA, 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



Unit (Resistance : Ω, Capacitance : F)

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