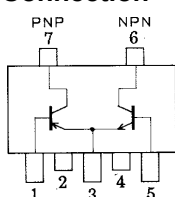


SANYO**FP205**

PNP/NPN Epitaxial Planar Silicon Transistors

Push-Pull Circuit Applications**Features**

- Composite type with a PNP transistor and an NPN transistor in one package, facilitating high-density mounting.
- The FP205 is composed of 2 chips, one being equivalent to the 2SA1416 and the other 2SC3646, which are placed in one package.

Electrical Connection

- 1:Base
2:Collector
3:Emitter Common
4:Collector
5:Base
6:Collector
7:Collector
(Top view)

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

() : PNP

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)120	V
Collector-to-Emitter Voltage	V_{CEO}		(-)100	V
Emitter-to-Base Voltage	V_{EBO}		(-)6	V
Collector Current	I_C		(-)1	A
Collector Current (Pulse)	I_{CP}		(-)2	A
Base Current	I_B		(-)0.2	A
Collector Dissipation	P_C	Mounted on ceramic board (250mm ² ×0.8mm) 1unit	0.8	W
Total Power Dissipation	P_T	Mounted on ceramic board (250mm ² ×0.8mm)	1.1	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)100V, I_E=0$			(-)100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			(-)100	nA
DC Current Gain	h_{FE}	$V_{CE}=(-)5V, I_C=(-)100mA$	140		400	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)100mA$		120		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(13)		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)400mA, I_B=(-)40mA$		8.5		pF
				(-0.2)	(-0.6)	V
				0.1	0.4	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)400mA, I_B=(-)40mA$		(-)0.85	(-)1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)120			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)100			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-)6			V
Turn-ON Time	t_{on}	See specified Test Circuit		(80)80		ns
Storage Time	t_{stg}	See specified Test Circuit		(700)850		ns
Fall Time	t_f	See specified Test Circuit		(40)50		ns

Marking:205

SANYO Electric Co.,Ltd. Semiconductor Business Headquarters

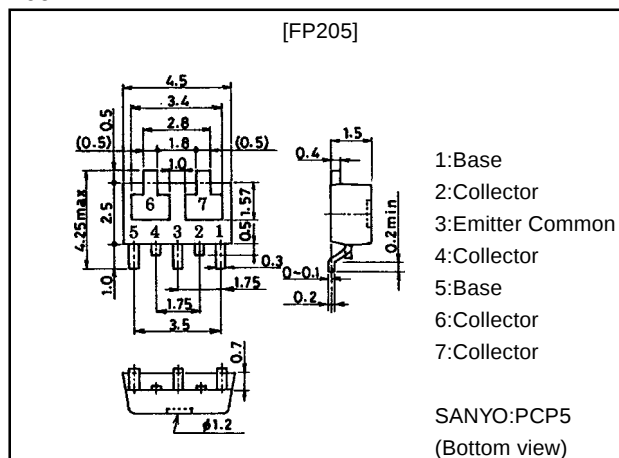
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

52098HA (KT)/82494MT (KOTO) A8-9592 No.4494-1/4

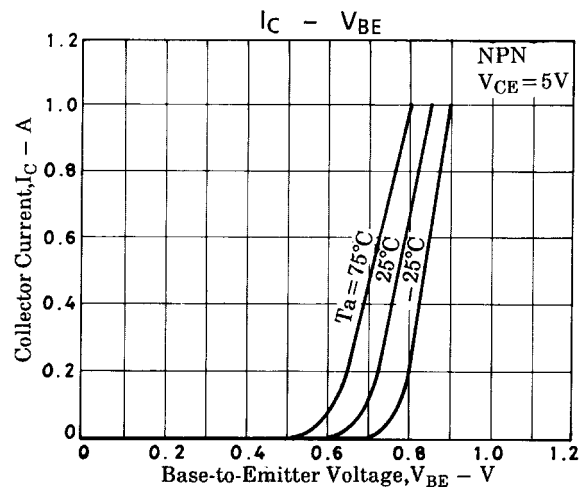
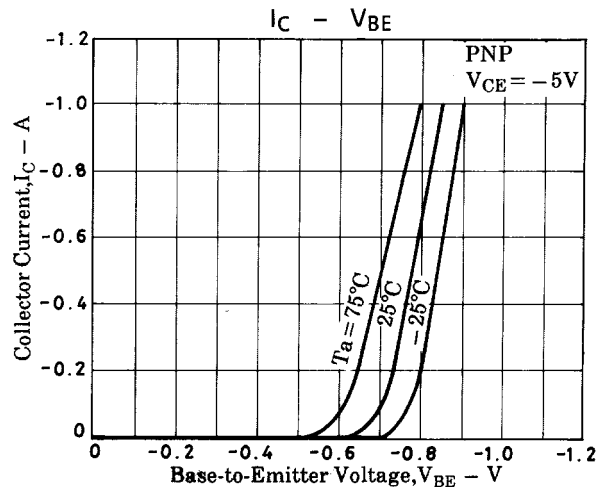
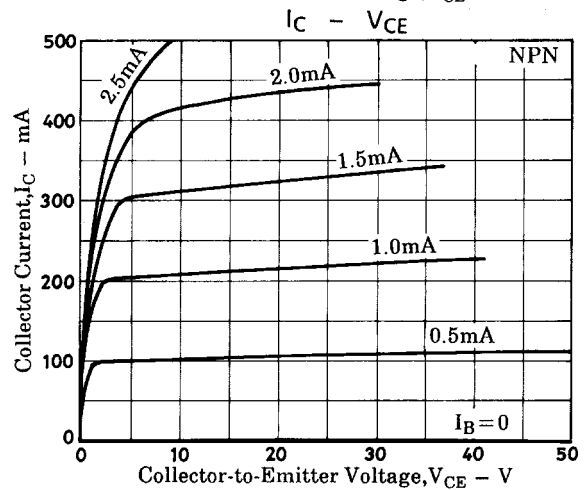
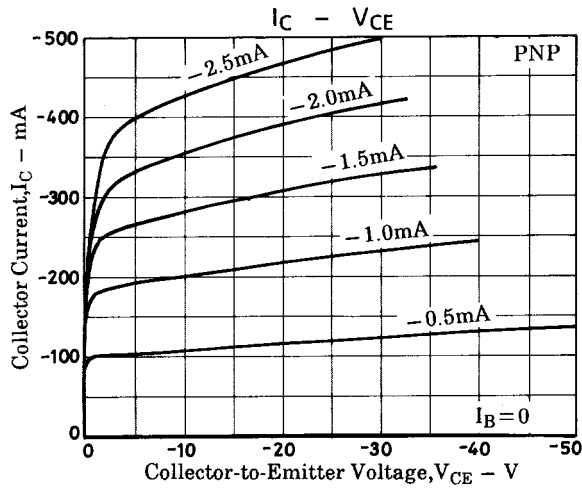
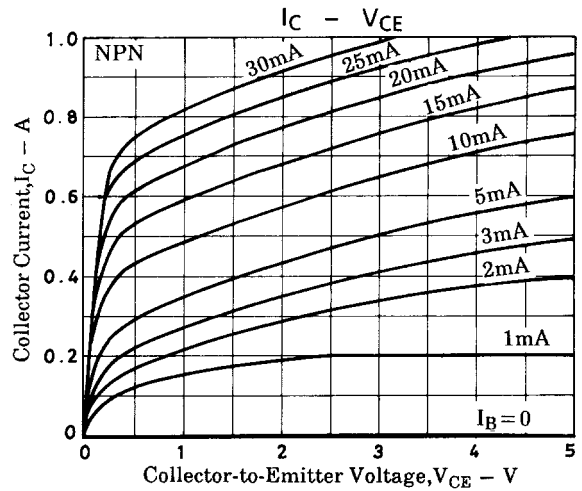
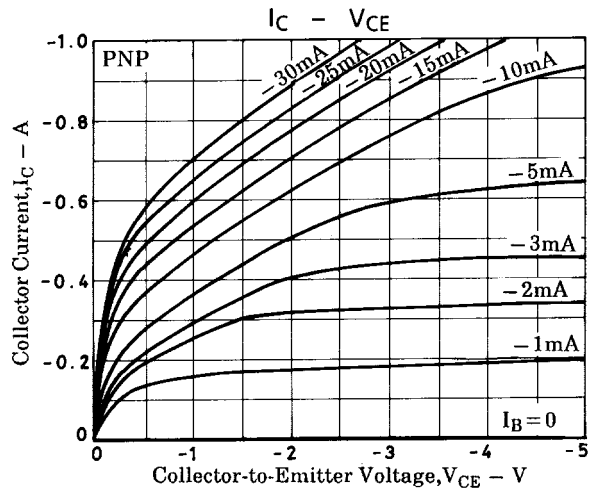
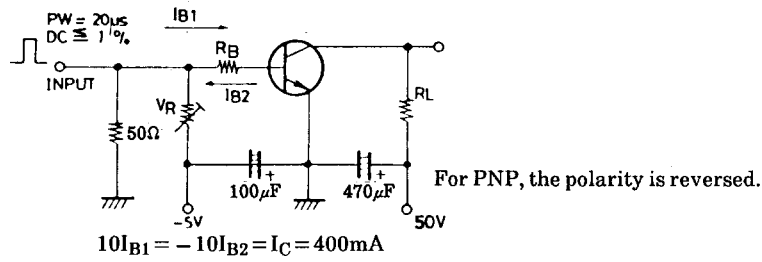
Package Dimensions

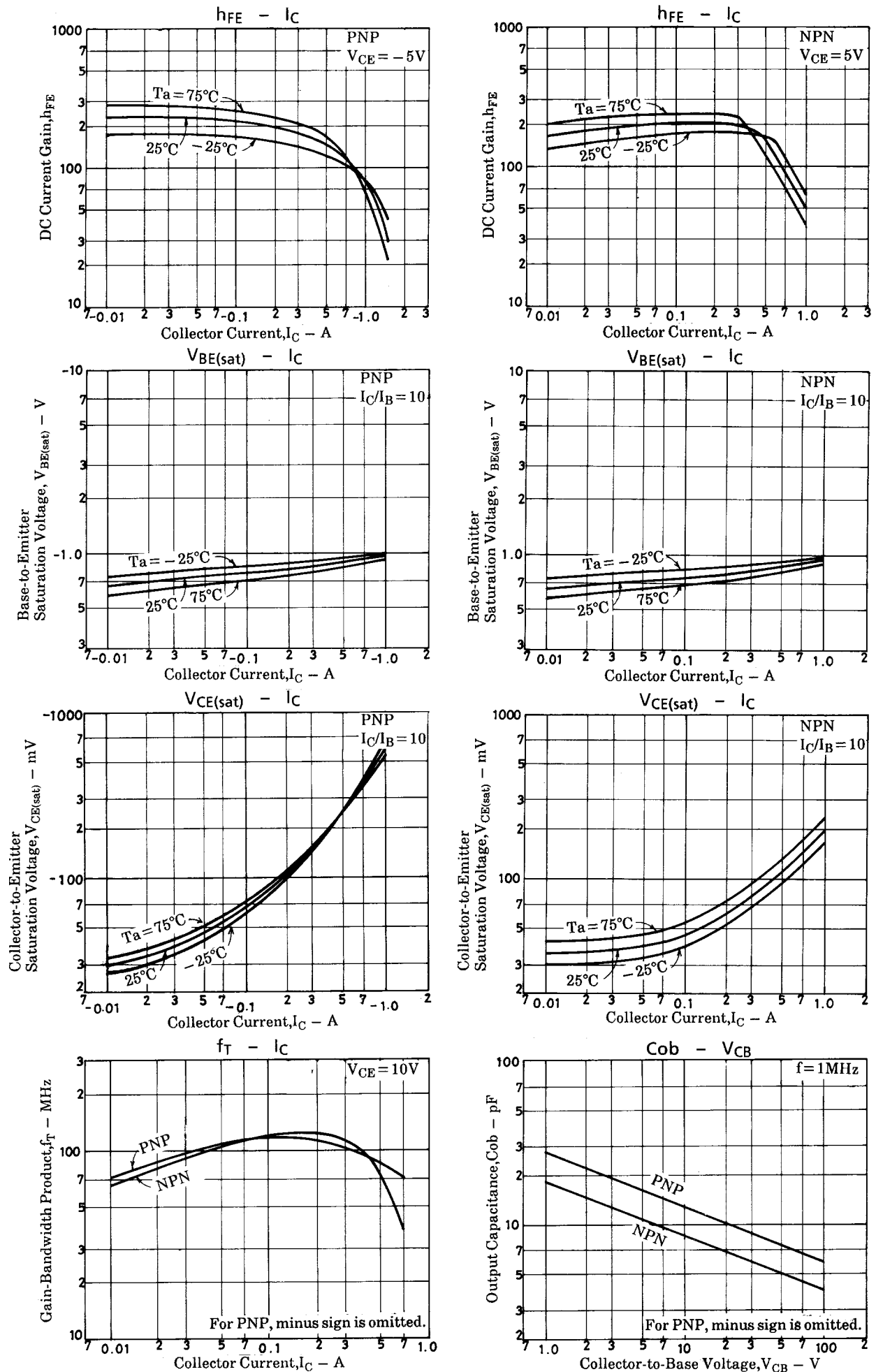
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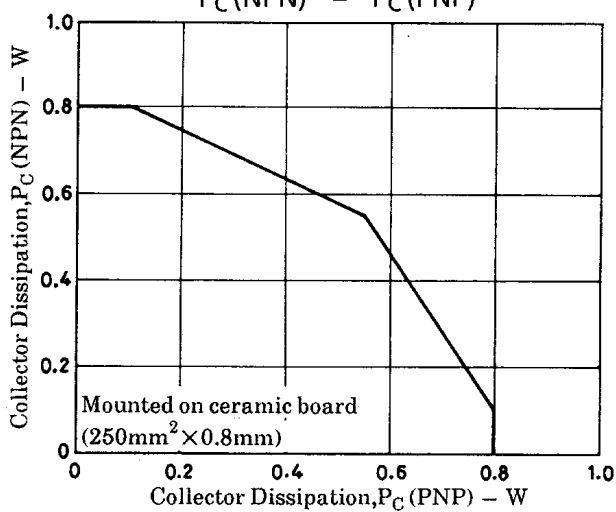
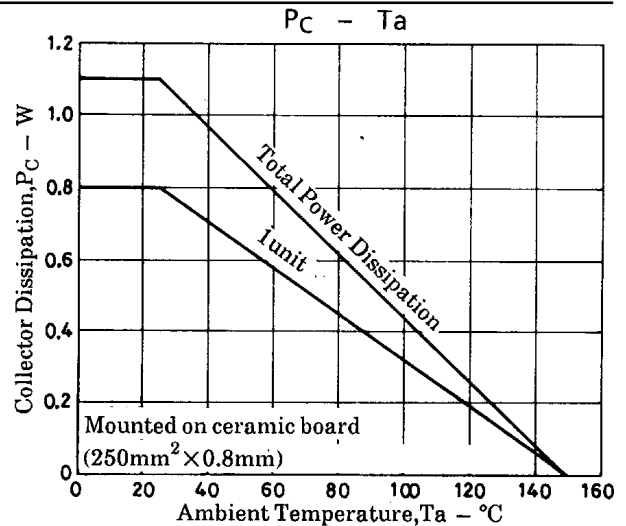
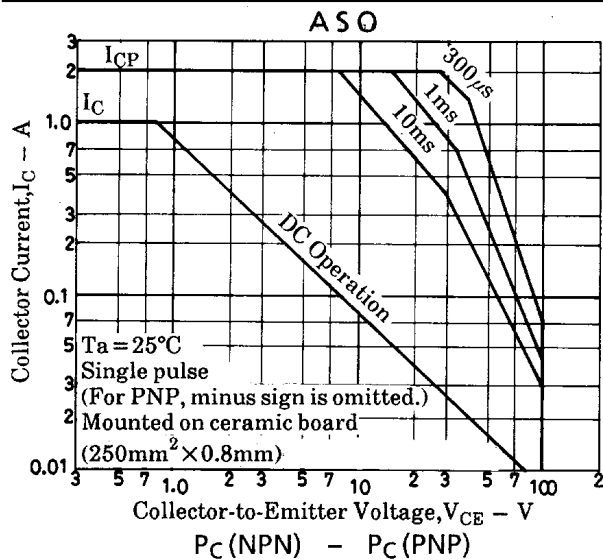
2097A



Switching Time Test Circuit







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