

Ordering number:EN4494



FP205

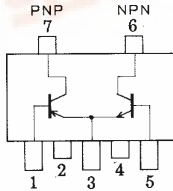
PNP/NPN Epitaxial Planar Silicon Transistors

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

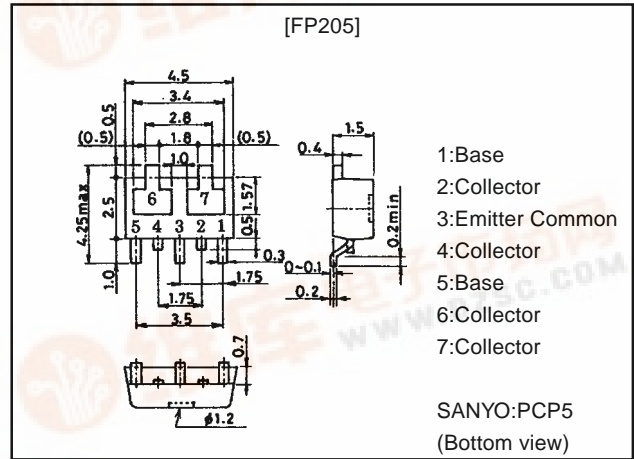


- 1:Base
 - 2:Collector
 - 3:Emitter Common
 - 4:Collector
 - 5:Base
 - 6:Collector
 - 7:Collector
- (Top view)

Package Dimensions

unit:mm

2097A



Specifications

Absolute Maximum Ratings at Ta = 25°C

() : PNP

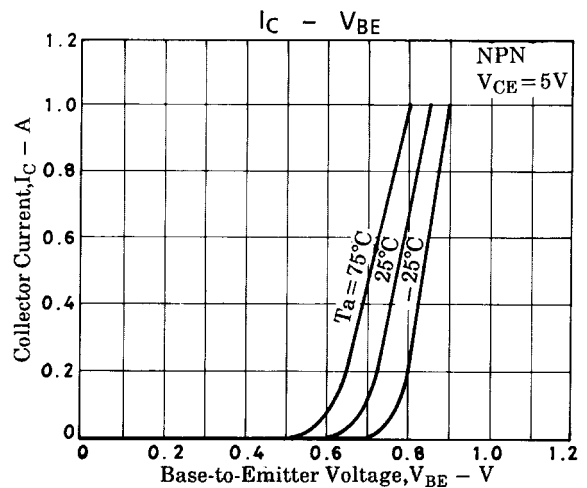
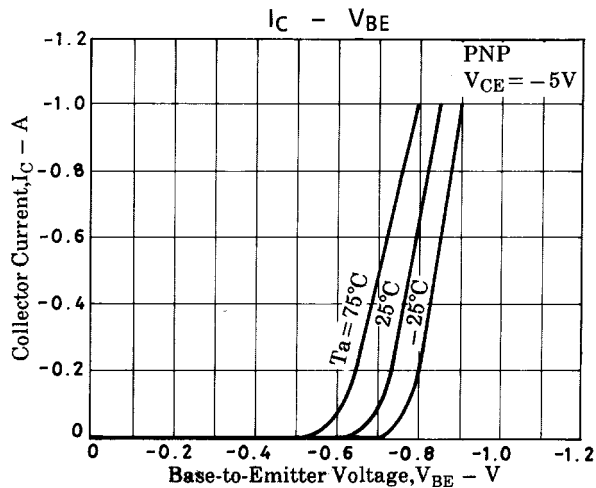
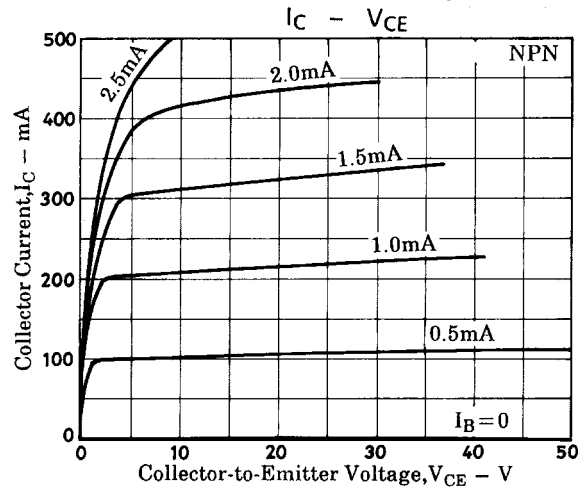
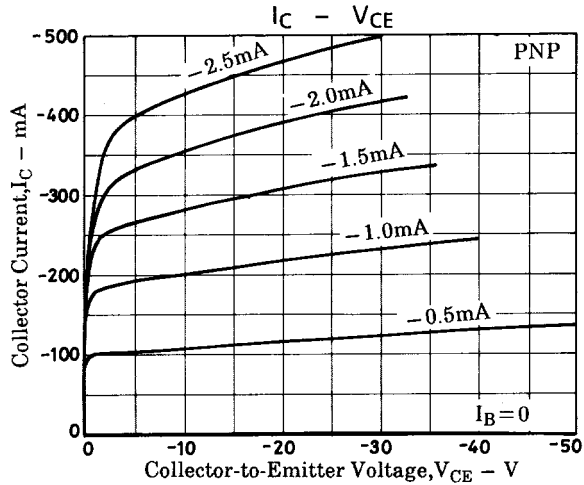
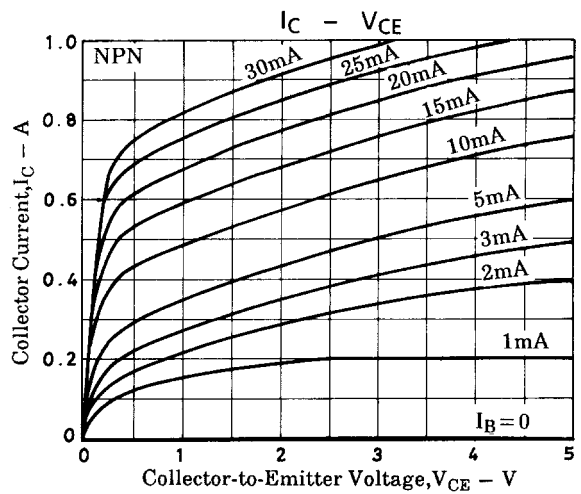
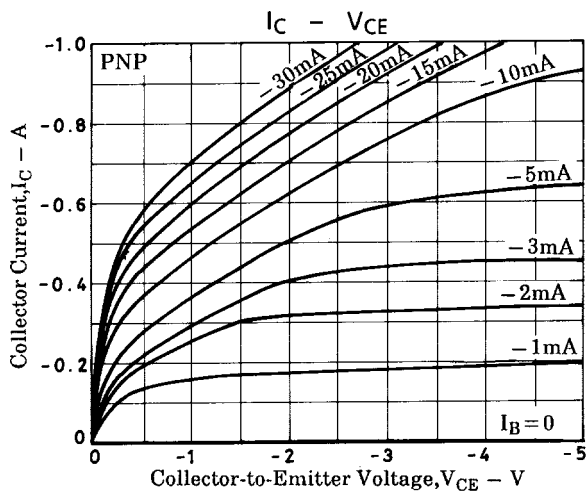
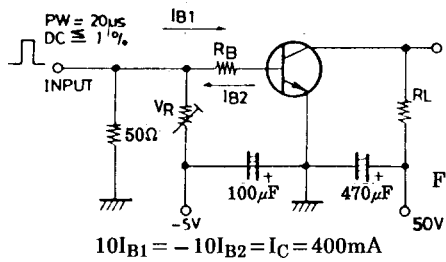
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)120	V
Collector-to-Emitter Voltage	V_{CEO}		(-)100	V
Emitter-to-Base Voltage	V_{EBO}		(-)6	V
Collector Current	I_C		(-)1	A
Collector Current (Pulse)	I_{CP}		(-)2	A
Base Current	I_B		(-)0.2	A
Collector Dissipation	P_C	Mounted 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

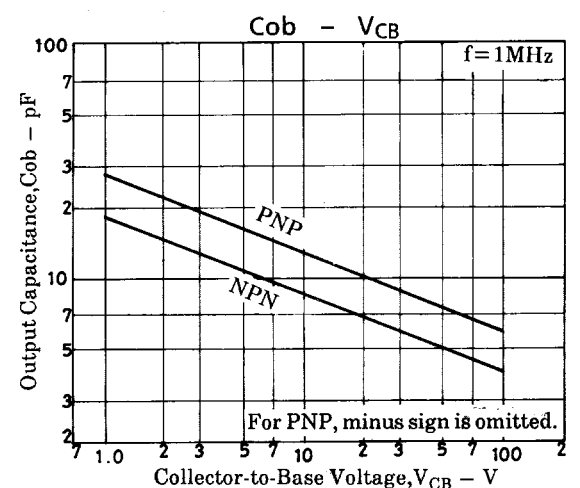
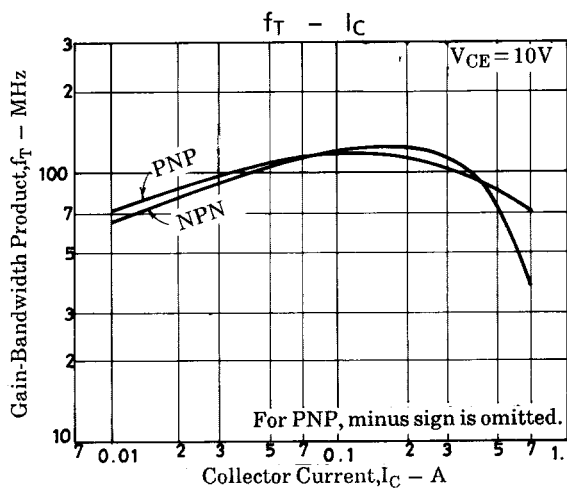
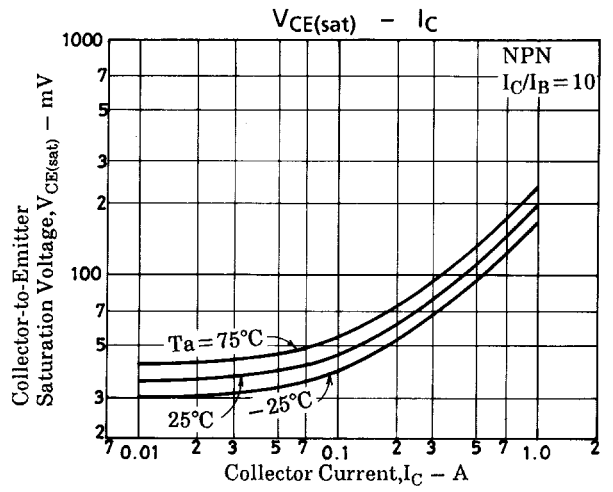
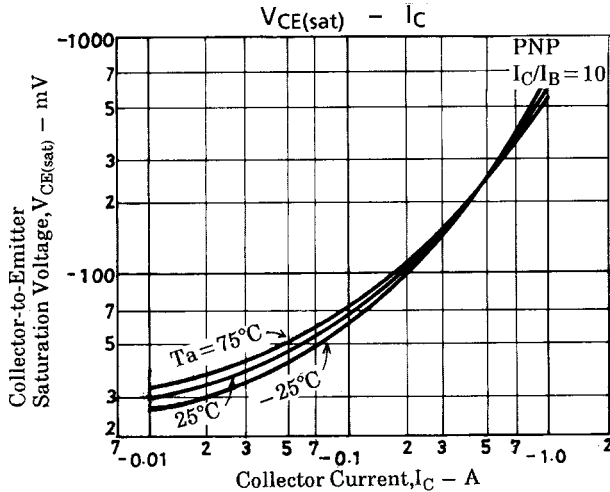
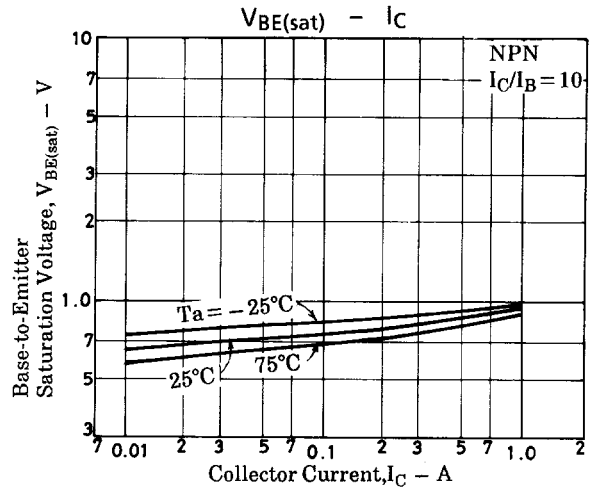
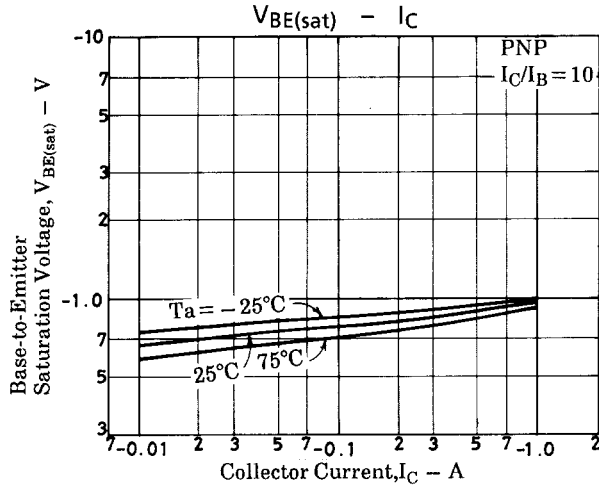
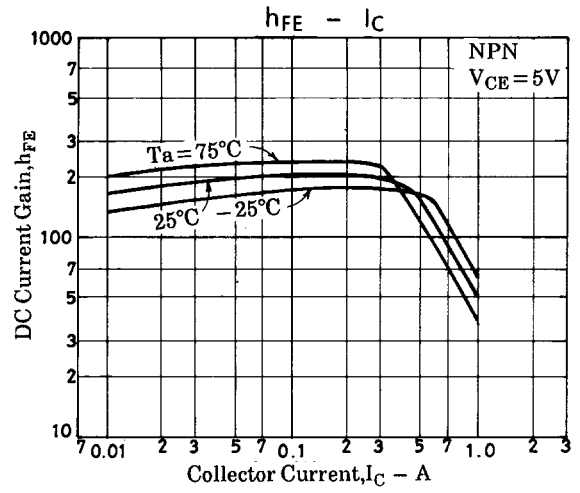
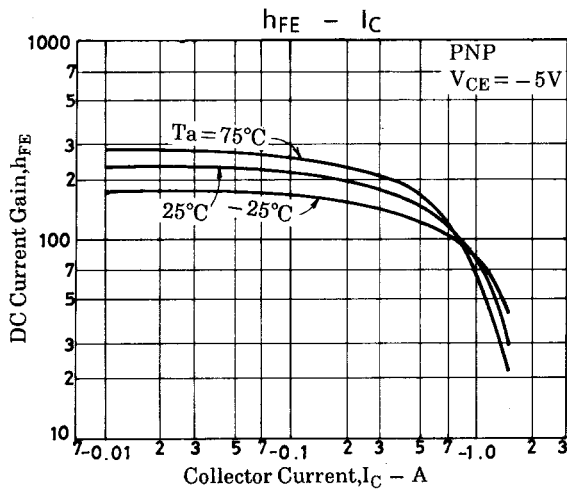
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)100V, I_E = 0$			(-)100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)100	nA
DC Current Gain	h_{FE}	$V_{CE} = (-)5V, I_C = (-)100mA$	140		400	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)100mA$		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
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)400mA, I_B = (-)40mA$		0.1	0.4	V
				(-)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)		ns
				850		ns
Fall Time	t_f	See specified Test Circuit		(40)50		ns



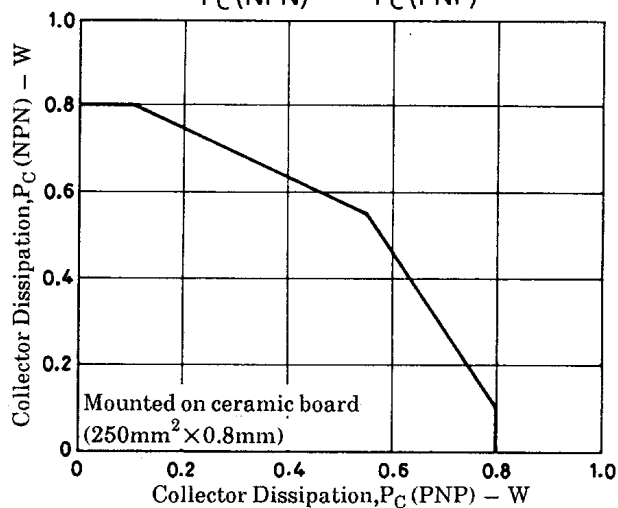
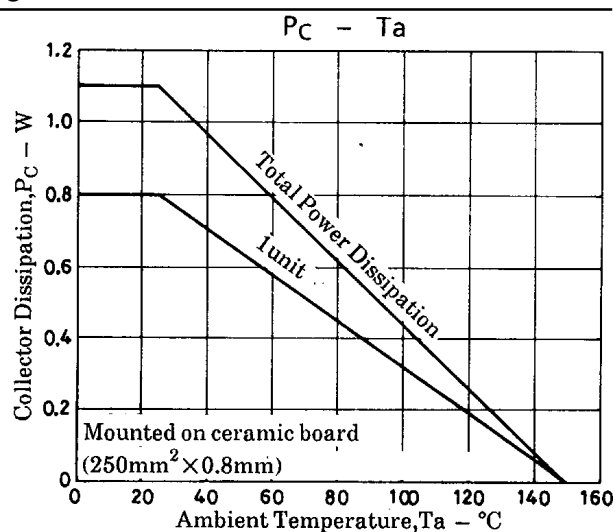
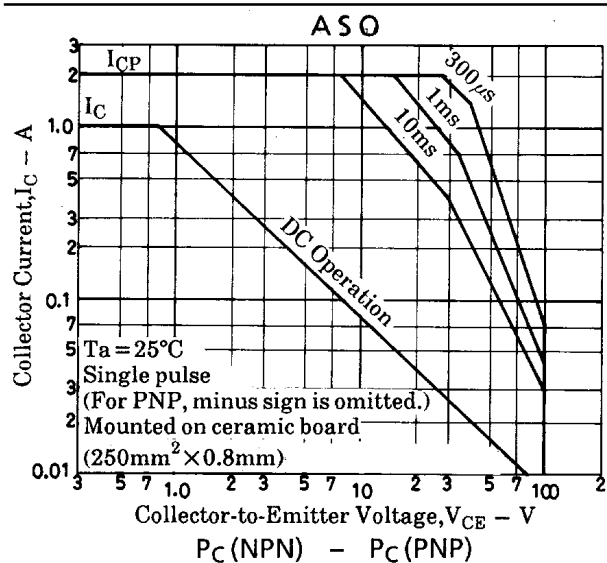
Switching Time Test Circuit



FP205



FP205



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