

Ordering number:EN4778



FP206

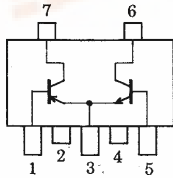
PNP/NPN Epitaxial Planar Silicon Transistors

Push-Pull Circuit Applications

Features

- Composite type with a PNP transistor and an NPN transistor in one package, facilitating high-density mounting.
- The FP206 is composed of 2 chips, one being equivalent to the 2SA1728 and the other 2SC4519, placed in one package.

Electrical Connection

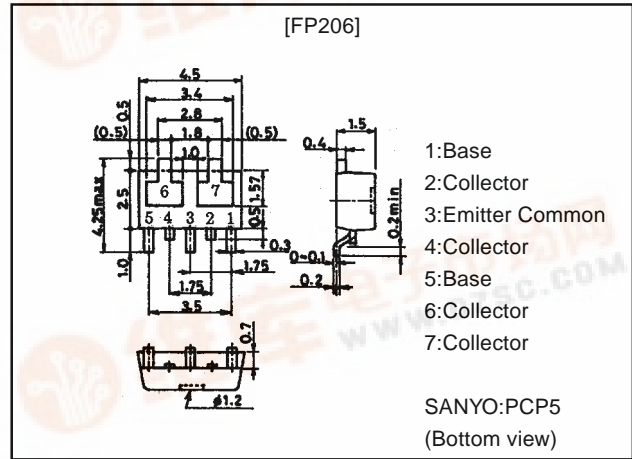


- 1:Base
 - 2:Collector
 - 3:Emitter Common
 - 4:Collector
 - 5:Base
 - 6:Collector
 - 7:Collector
- (Top view)

Package Dimensions

unit:mm

2097A



Specifications

Absolute Maximum Ratings at Ta = 25°C

() : PNP

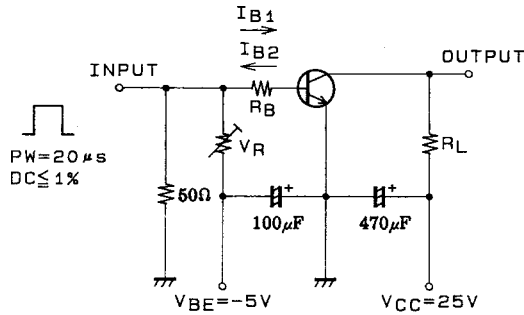
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)50	V
Collector-to-Emitter Voltage	V_{CEO}		(-)40	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)500	mA
Collector Current (Pulse)	I_{CP}		(-)1	A
Base Current	I_B		(-)100	mA
Collector Dissipation	P_C	Mounted on ceramic board (250mm ² ×0.8mm) 1unit	0.75	W
Total Power Dissipation	P_T	Mounted on ceramic board (250mm ² ×0.8mm)	1.0	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}	$V_{CB}=(-)40V, I_E=0$			(-)0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)3V, I_C=0$			(-)0.5	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)2V, I_C=(-)50mA$	100		400	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)2V, I_C=(-)50mA$		350		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(6)4		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)200mA, I_B=(-)10mA$		(-)0.2	(-)0.5	mV
				0.15	0.45	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)200mA, I_B=(-)10mA$		(-)0.8	(-)1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10μA, I_E=0$	(-)50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=∞$	(-)40			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		(60)60		ns
Storage Time	t_{stg}	See specified Test Circuit		(120)150		ns
Fall Time	t_f	See specified Test Circuit		(50)50		ns

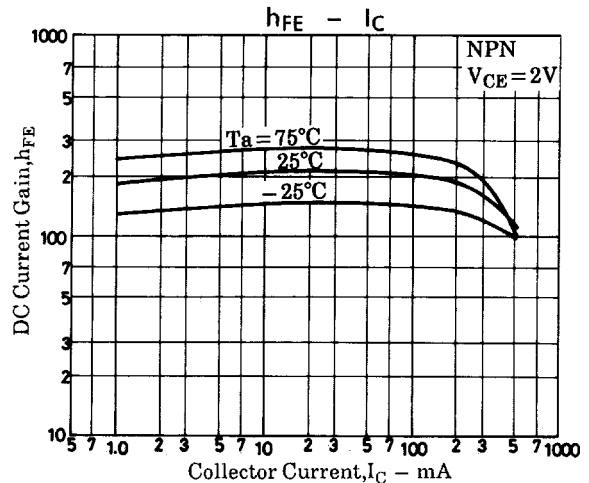
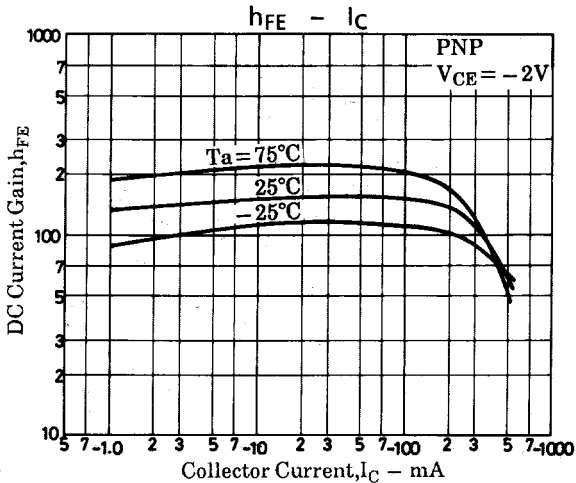
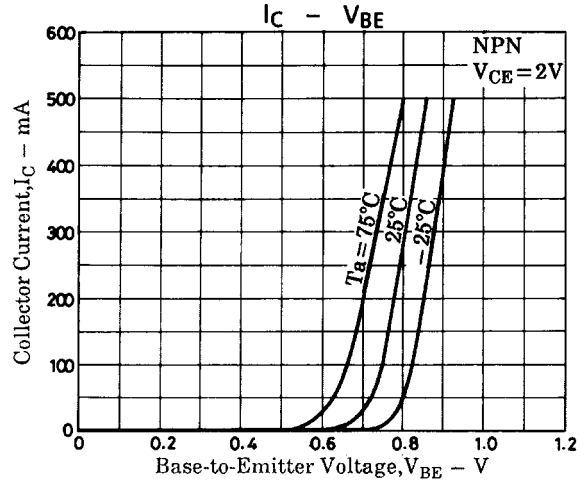
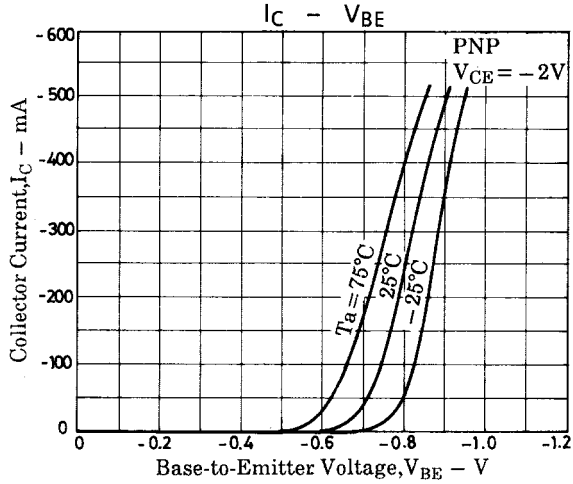
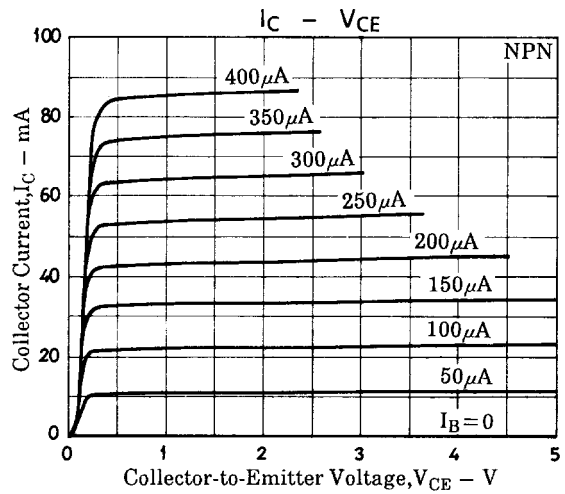
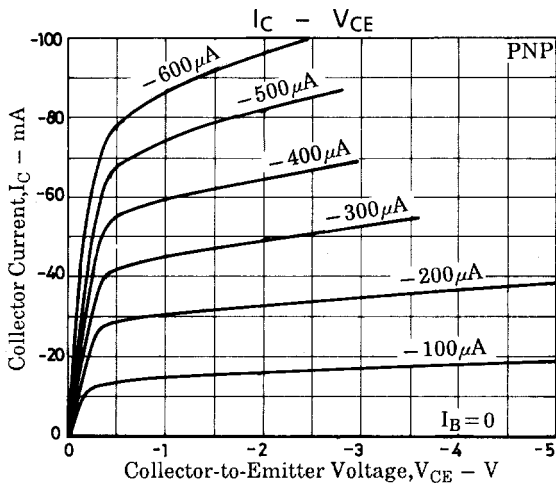


Switching Time Test Circuit

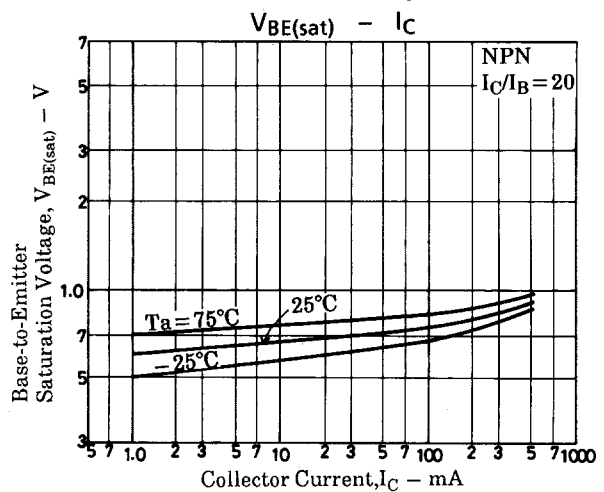
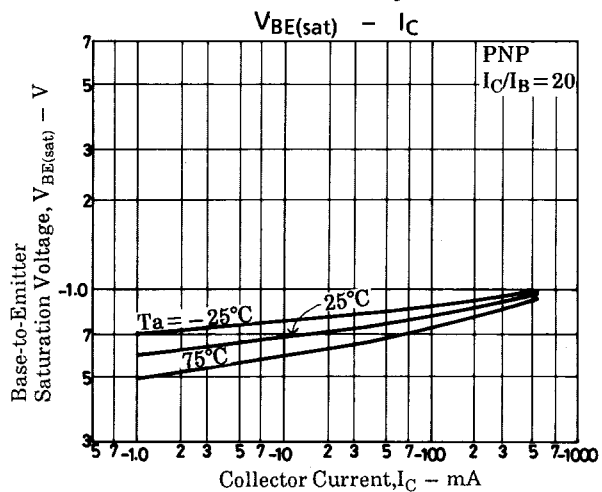
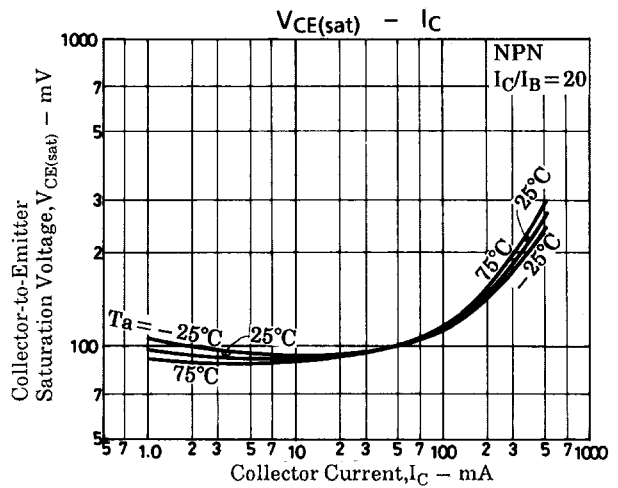
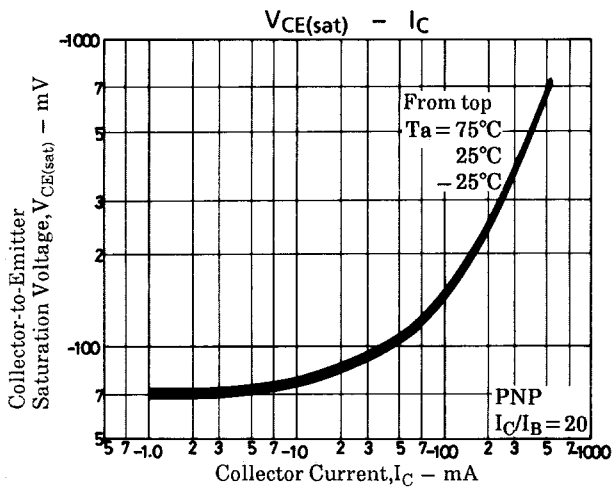
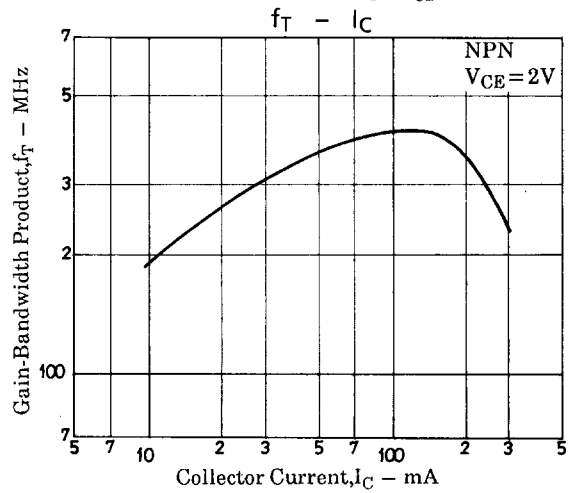
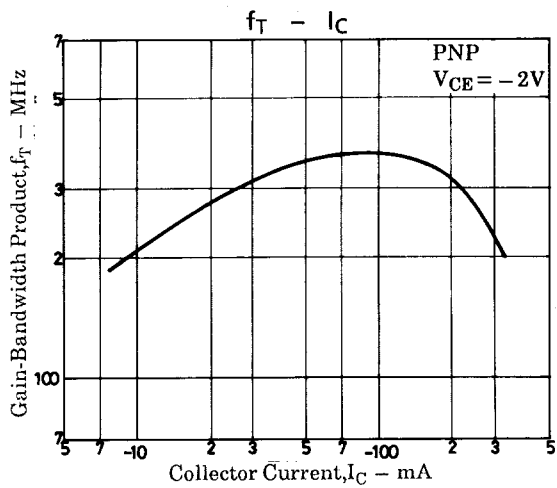
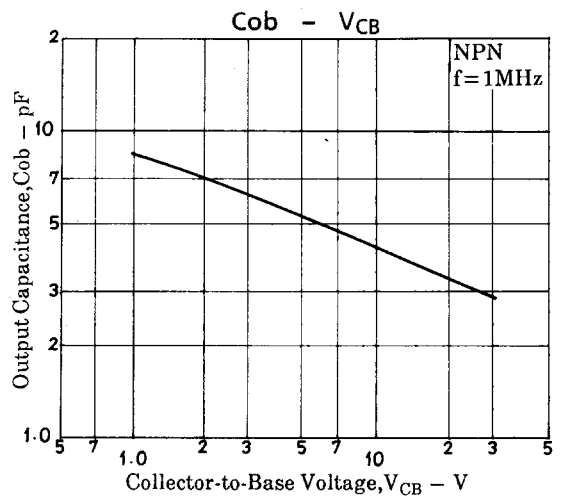
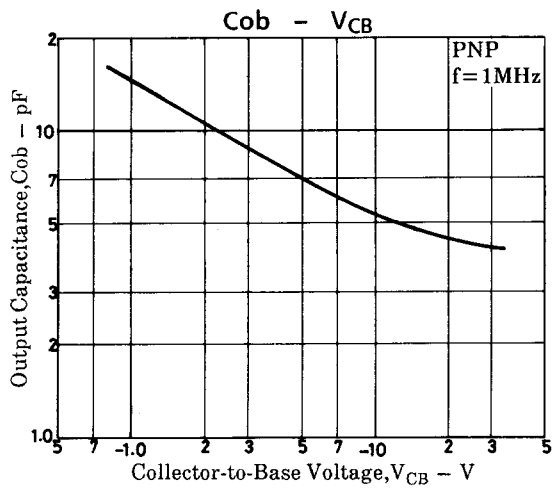


For PNP, the polarity is reversed.

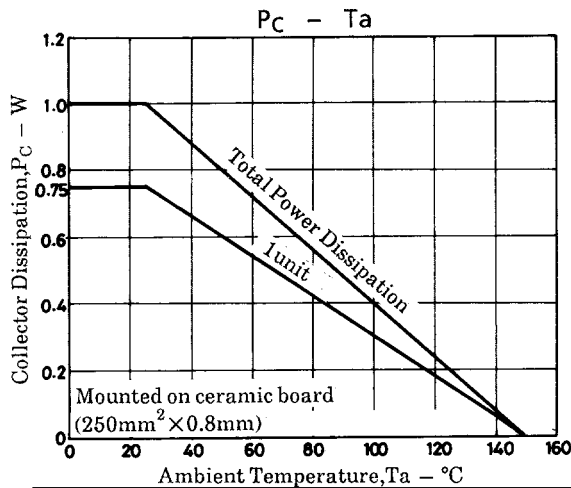
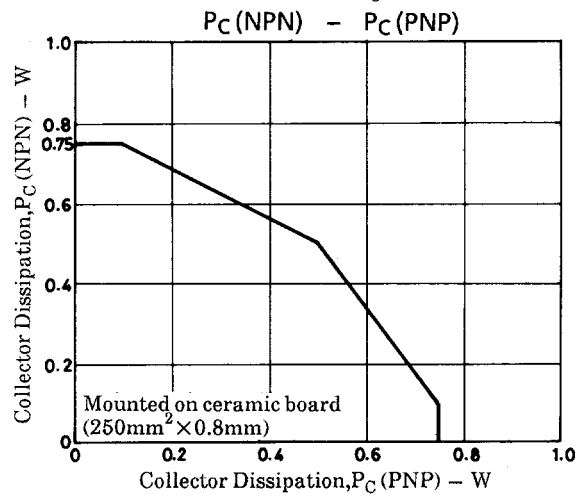
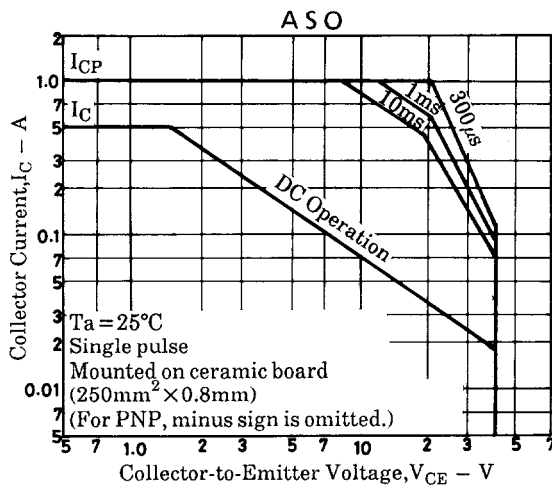
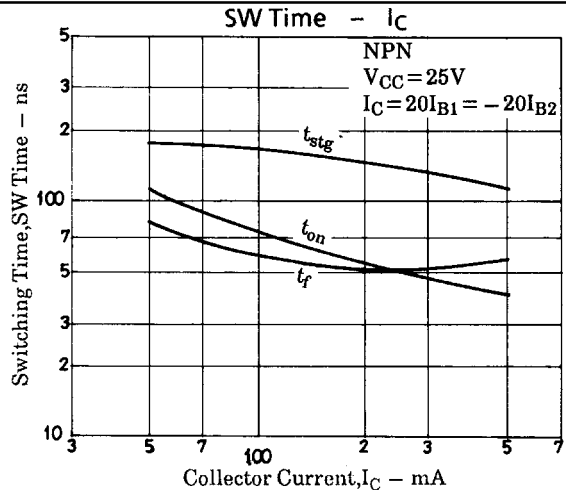
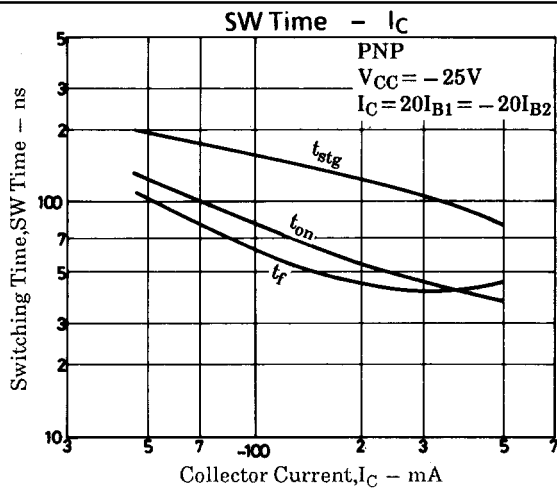
$$10 I_{B1} = -10 I_{B2} = I_C = 200 \text{ mA}$$



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