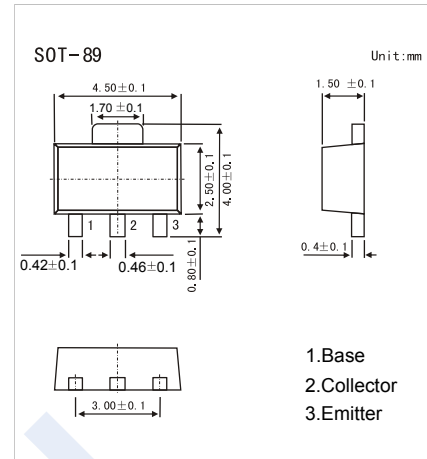


PNP Transistors

2SB1121

■ Features

- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.
- Fast switching speed.
- Complementary to 2SD1621



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-30	V
Collector - Emitter Voltage	V_{CE0}	-25	
Emitter - Base Voltage	V_{EB0}	-6	
Collector Current - Continuous	I_C	-2	A
Collector Current - Pulse	I_{CP}	-5	
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -100 \mu\text{A}$, $I_E = 0$	-30			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -1 \text{ mA}$, $R_{BE} = \infty$	-25			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -100 \mu\text{A}$, $I_C = 0$	-6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -20 \text{ V}$, $I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4 \text{ V}$, $I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5 \text{ A}$, $I_B = -75 \text{ mA}$		-0.35	-0.6	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1.5 \text{ A}$, $I_B = -75 \text{ mA}$		-0.85	-1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = -2 \text{ V}$, $I_C = -100 \text{ mA}$	100		560	
	$h_{FE(2)}$	$V_{CE} = -2 \text{ V}$, $I_C = -1.5 \text{ A}$	65			
Turn-on time	t_{on}	See specified Test Circuit.		60		ns
Storage time	t_{stg}			350		
Turn-off time	t_{off}			25		
Collector output capacitance	C_{ob}	$V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		32		μF
Transition frequency	f_T	$V_{CE} = -10 \text{ V}$, $I_C = -50 \text{ mA}$		150		MHz

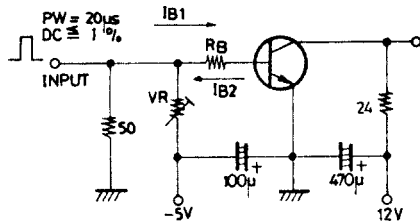
■ Classification of $h_{FE(1)}$

Type	2SB1121-R	2SB1121-S	2SB1121-T	2SB1121-U
Range	100-200	140-280	200-400	280-560
Marking	BDR	BDS	BDT	BDU

PNP Transistors

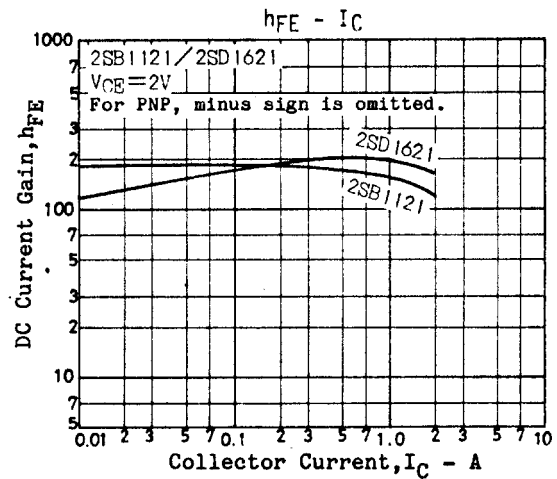
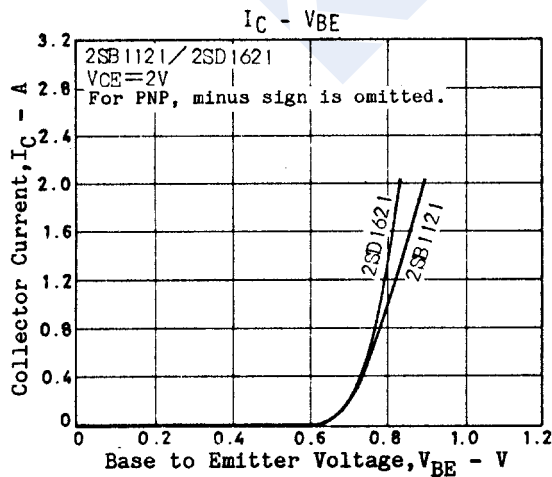
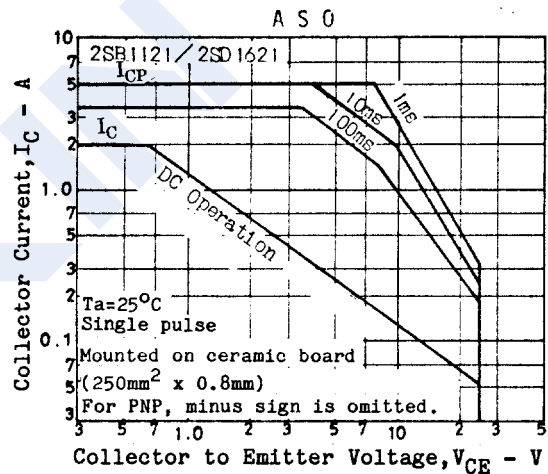
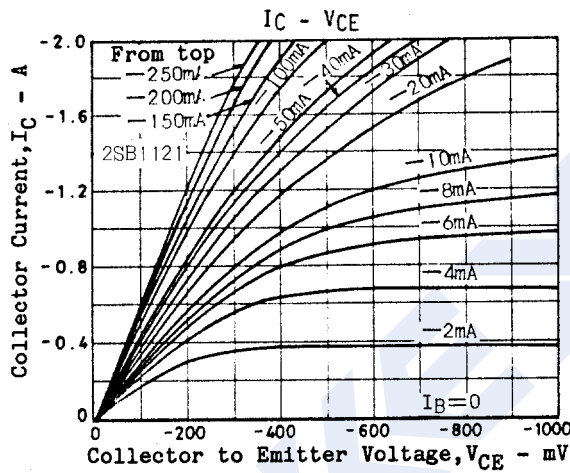
2SB1121

Switching Time Test Circuit



$20I_{B1} = -20I_{B2} = I_C = 500\text{mA}$
 (For PNP, the polarity is reversed.)
 Unit (resistance : Ω , capacitance : F)

Typical Characteristics



PNP Transistors

2SB1121

■ Typical Characteristics

