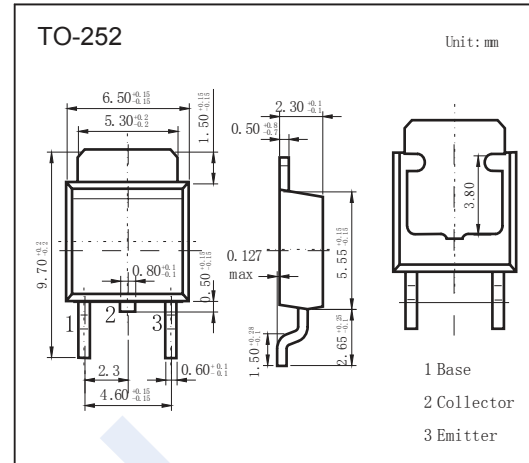


## PNP Transistors

## 2SB1202

## ■ Features

- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Large current capacity and wide ASO.
- Complementary to 2SD1802

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-60	V
Collector - Emitter Voltage	$V_{CE0}$	-50	
Emitter - Base Voltage	$V_{EB0}$	-6	
Collector Current - Continuous	$I_C$	-3	A
Collector Current - Pulse	$I_{CP}$	-6	
Collector Power Dissipation $T_c = 25^\circ\text{C}$	$P_C$	15	W
		1	
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	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-60			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$	-50			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-6			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = -50\text{V}$ , $I_E = 0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -5\text{V}$ , $I_C = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2 \text{ A}$ , $I_B = -100\text{mA}$		-0.35	-0.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2 \text{ A}$ , $I_B = -100\text{mA}$		-0.94	-1.2	
DC current gain	$h_{FE}$	$V_{CE} = -2\text{V}$ , $I_C = -100 \text{ mA}$	100		560	
		$V_{CE} = -2\text{V}$ , $I_C = -3 \text{ A}$	35			
Turn-ON Time	$t_{on}$	See specified Test Circuit		70		ns
Storage Time	$t_{stg}$			450		
Fall Time	$t_f$			35		
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		39		$\mu\text{F}$
Transition frequency	$f_T$	$V_{CE} = -10\text{V}$ , $I_C = -50\text{mA}$		150		MHz

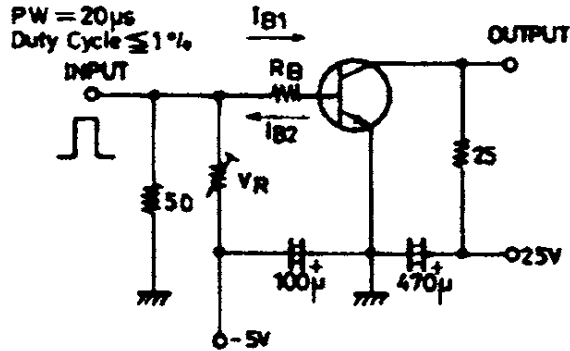
■ Classification of  $h_{FE}(1)$ 

Type	2SB1202-R	2SB1202-S	2SB1202-T	2SB1202-U
Range	100-200	140-280	200-400	280-560

### PNP Transistors

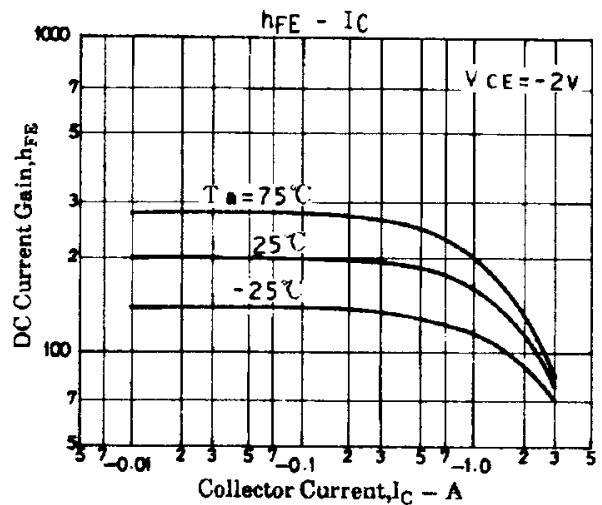
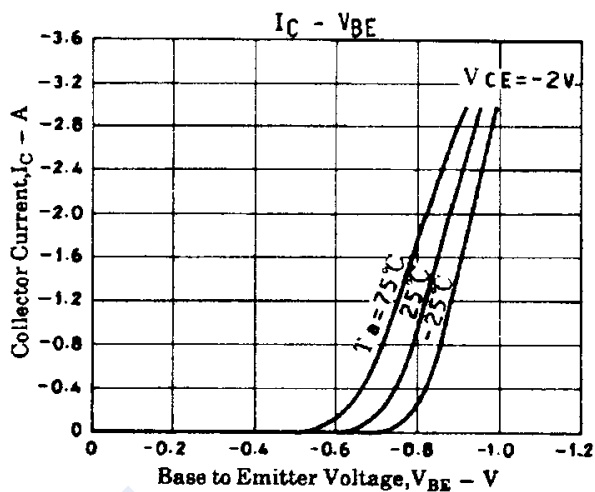
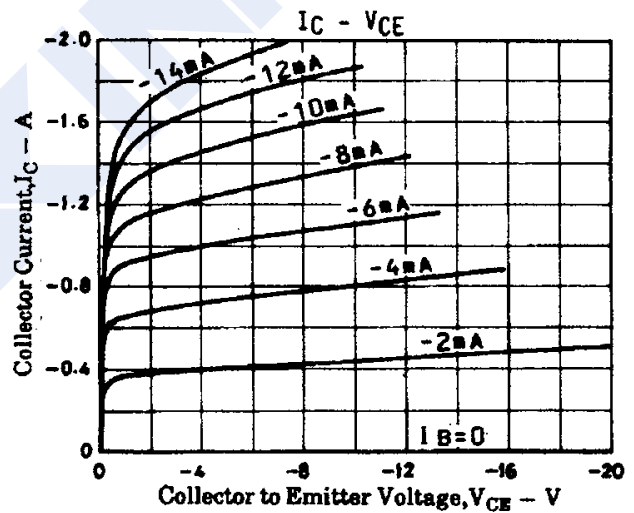
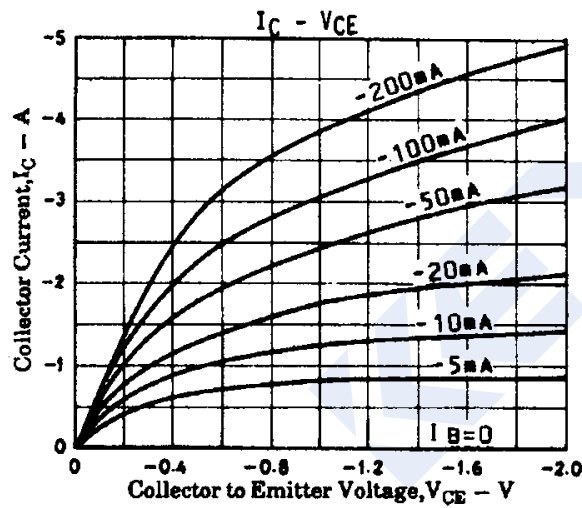
### 2SB1202

Switching Time Test Circuit



$$I_C = 10 I_{B1} = -10 I_{B2} = 1A$$

■ Typical Characteristics



### PNP Transistors

### 2SB1202

■ Typical Characteristics

