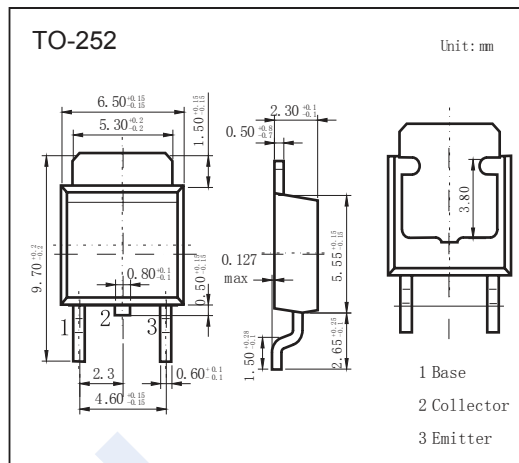


## PNP Transistors

## 2SB1216



### Features

- Low collector-to-emitter saturation voltage.
- High current and high fr
- Fast switching time.
- Complementary to 2SD1816

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-120	V
Collector - Emitter Voltage	$V_{CE0}$	-100	
Emitter - Base Voltage	$V_{EB0}$	-6	
Collector Current - Continuous	$I_C$	-4	A
Collector Current - Pulse	$I_{CP}$	-8	
Collector Power Dissipation $T_c = 25^\circ\text{C}$	$P_C$	20	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	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-120			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$	-100			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-6			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -100\text{V}$ , $I_E = 0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5\text{V}$ , $I_C = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2 \text{ A}$ , $I_B = -200\text{mA}$		-0.2	-0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2 \text{ A}$ , $I_B = -200\text{mA}$		-0.9	-1.2	
DC current gain	$h_{FE}$	$V_{CE} = -5\text{V}$ , $I_C = -500 \text{ mA}$	70		400	
		$V_{CE} = -5\text{V}$ , $I_C = -3 \text{ A}$	40			
Turn-ON Time	$t_{on}$	See specified Test Circuit		100		ns
Storage Time	$t_{stg}$			800		
Fall Time	$t_f$			50		
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		65		$\text{pF}$
Transition frequency	$f_T$	$V_{CE} = -10\text{V}$ , $I_C = -500 \text{ mA}$		130		MHz

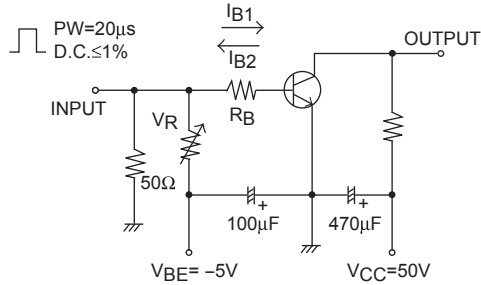
### Classification of $h_{fe}(1)$

Type	2SB1216-Q	2SB1216-R	2SB1216-S	2SB1216-T
Range	70-140	100-200	140-280	200-400

# PNP Transistors

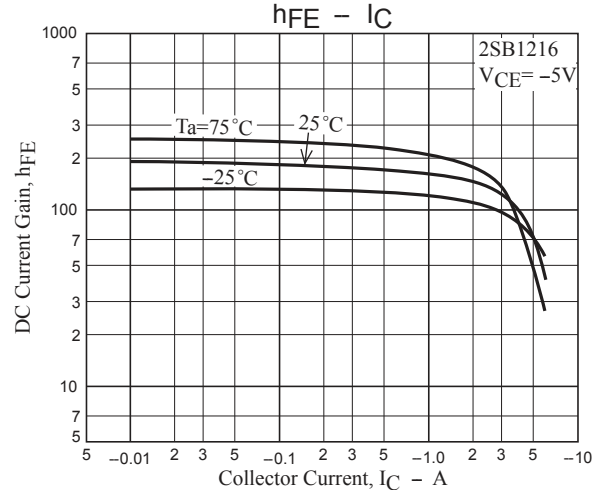
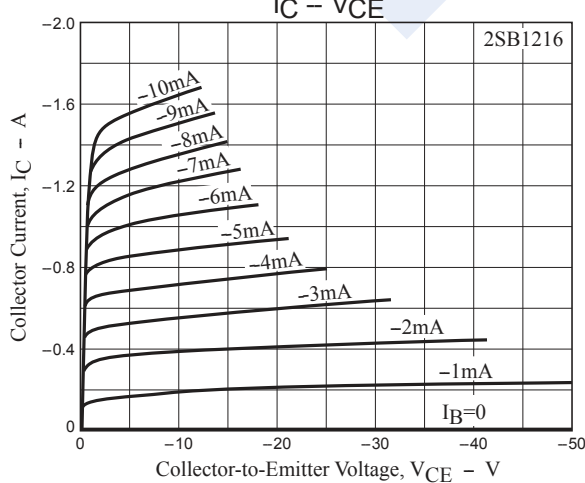
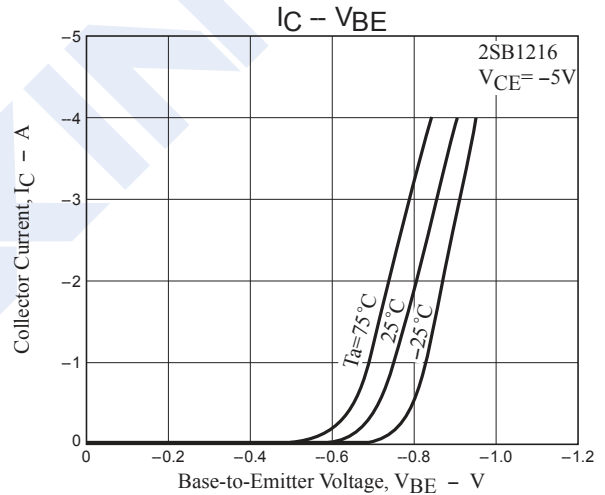
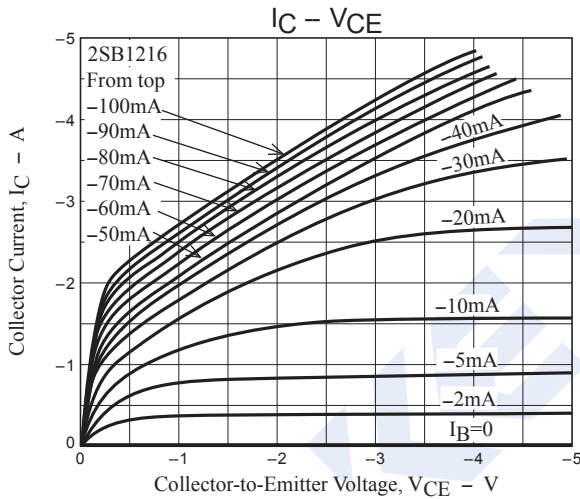
## 2SB1216

Switching Time Test Circuit



$I_C = 10I_{B1} = -10I_{B2} = 2A$   
 For PNP, the polarity is reversed.

■ Typical Characteristics



# PNP Transistors

## 2SB1216

### Typical Characteristics

