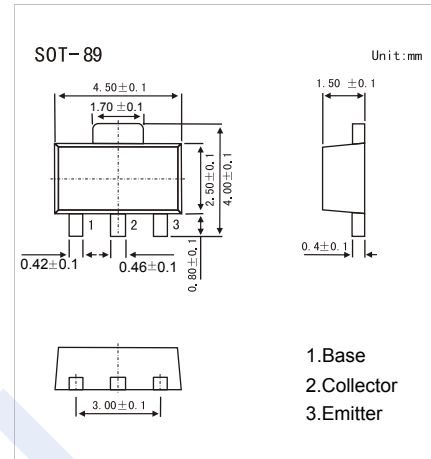


## PNP Transistors

### 2SB1118

#### ■ Features

- Low collector-to-emitter saturation voltage.
- Very small size making it easy to provide high density, small-sized hybrid IC's.
- Complementary to 2SD1618



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CBO}$	-20	V
Collector - Emitter Voltage	$V_{CEO}$	-15	
Emitter - Base Voltage	$V_{EBO}$	-5	
Collector Current - Continuous	$I_C$	-0.7	A
Collector current -Pulse	$I_{CP}$	-1.5	
Collector Power Dissipation (Note.1)	$P_C$	0.5 1.3	W
Junction Temperature	$T_J$	150	
Storage Temperature range	$T_{stg}$	-55 to 150	$^\circ\text{C}$

Note.1: Mounted on ceramic board (250mm<sup>2</sup> × 0.8mm)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CBO}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-20			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$	-15			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -15\text{V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4\text{V}$ , $I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -5 \text{ mA}$ , $I_B = -0.5 \text{ mA}$		-15	-35	mV
		$I_C = -100 \text{ mA}$ , $I_B = -10 \text{ mA}$		-60	-120	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100 \text{ mA}$ , $I_B = -10 \text{ mA}$		-0.8	-1.2	V
DC current gain	$h_{FE}$	$V_{CE} = -2\text{V}$ , $I_C = -50 \text{ mA}$	140		560	
		$V_{CE} = -2\text{V}$ , $I_C = -500 \text{ mA}$	60			
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		13		pF
Transition frequency	$f_T$	$V_{CE} = -10\text{V}$ , $I_C = -50\text{mA}$		250		MHz

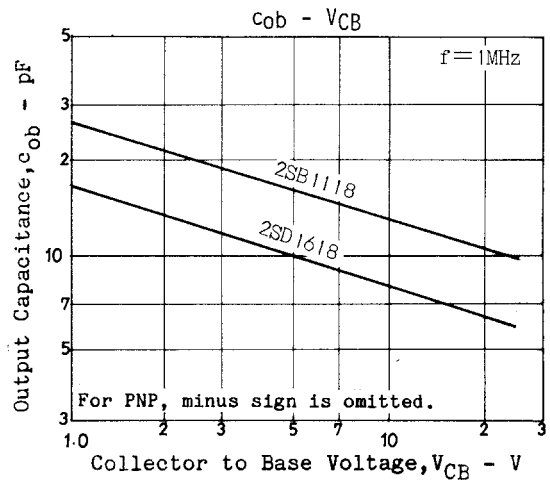
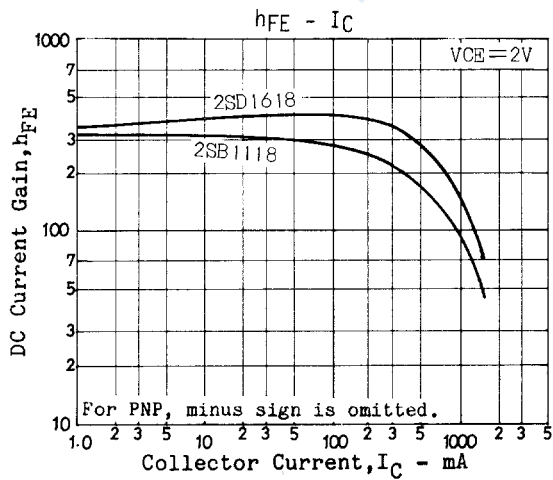
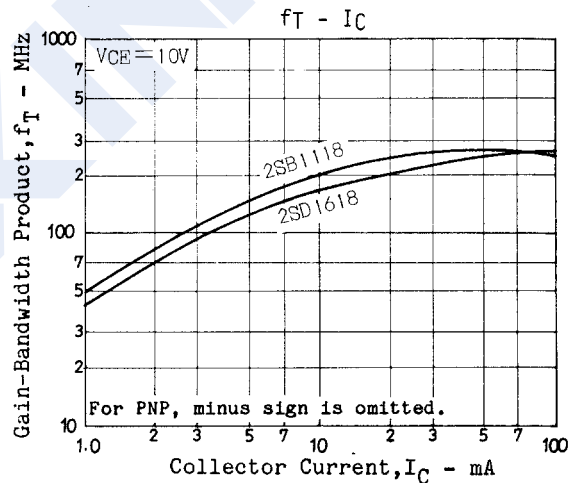
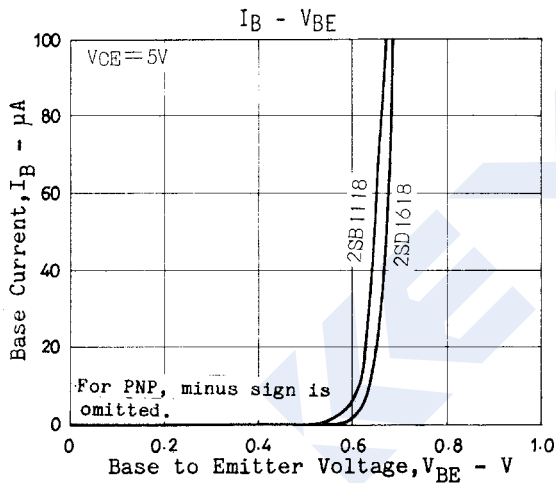
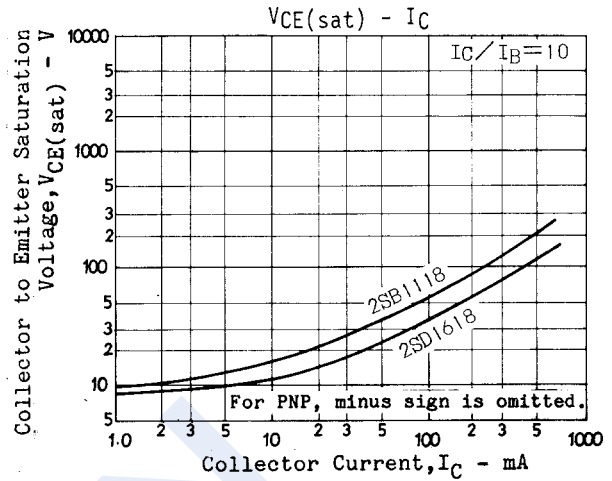
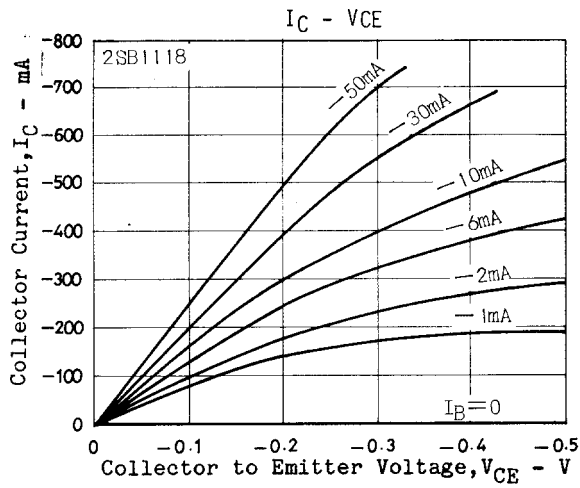
#### ■ Classification of $h_{FE}(1)$

Type	2SB1118-S	2SB1118-T	2SB1118-U
Range	140-280	200-400	280-560
Marking	BA S*	BA T*	BA U*

### PNP Transistors

### 2SB1118

■ Typical Characteristics



### PNP Transistors

### 2SB1118

■ Typical Characteristics

