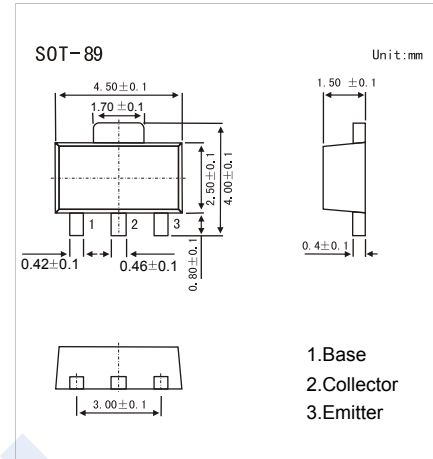
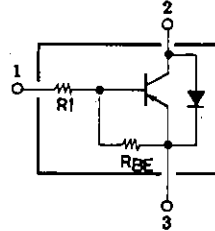


## PNP Transistors

### 2SB1394-HF

#### ■ Features

- Contains diode between collector and emitter.
- Low saturation voltage.
- Large current capacity.
- Complementary to 2SD2099-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-40	V
Collector - Emitter Voltage	$V_{CE0}$	-30	
Emitter - Base Voltage	$V_{EB0}$	-6	
Collector Current - Continuous	$I_C$	-3	A
Collector Current - Pulse	$I_{CP}$	-5	
Collector Power Dissipation	$P_C$	1.5	W
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	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-40			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = -10 \text{ mA}$ , $R_{BE} = \infty$	-30			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-6			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -35 \text{ V}$ , $I_E = 0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5 \text{ V}$ , $I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1 \text{ A}$ , $I_B = -50 \text{ mA}$			-0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1 \text{ A}$ , $I_B = -50 \text{ mA}$			-1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = -2 \text{ V}$ , $I_C = -500 \text{ mA}$	70			
	$h_{FE(2)}$	$V_{CE} = -2 \text{ V}$ , $I_C = -2 \text{ A}$	50			
Base-to-Emitter Resistance	$R_{BE}$			0.8		$\text{k}\Omega$
Base Resistance	$R_1$		60		120	$\Omega$
Diode Forward Voltage	$V_F$	$I_F = 500 \text{ mA}$			1.5	V
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		55		$\text{pF}$
Transition frequency	$f_T$	$V_{CE} = -2 \text{ V}$ , $I_C = -500 \text{ mA}$		100		MHz

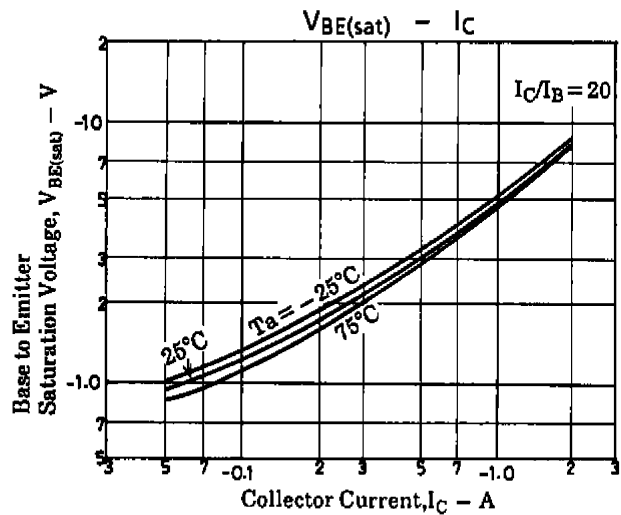
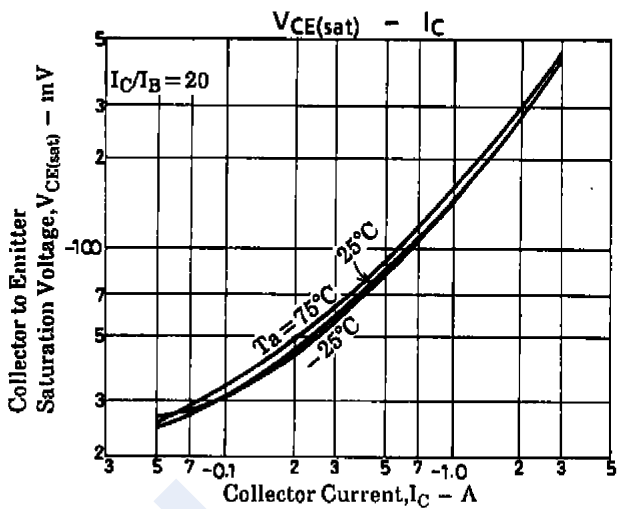
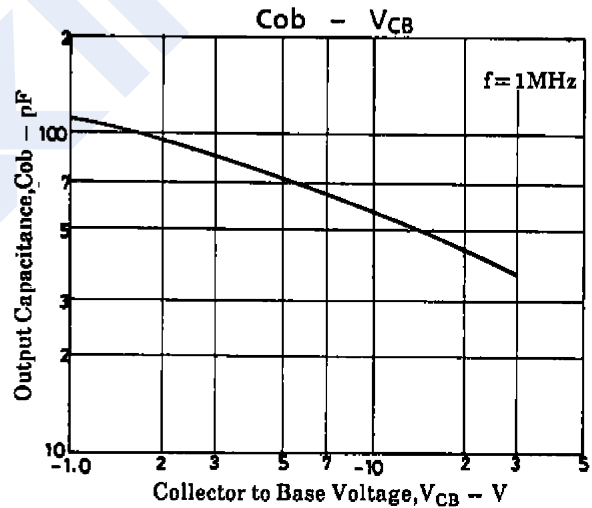
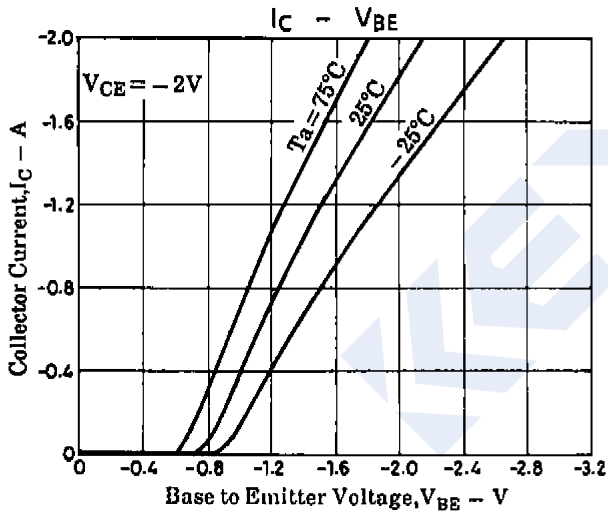
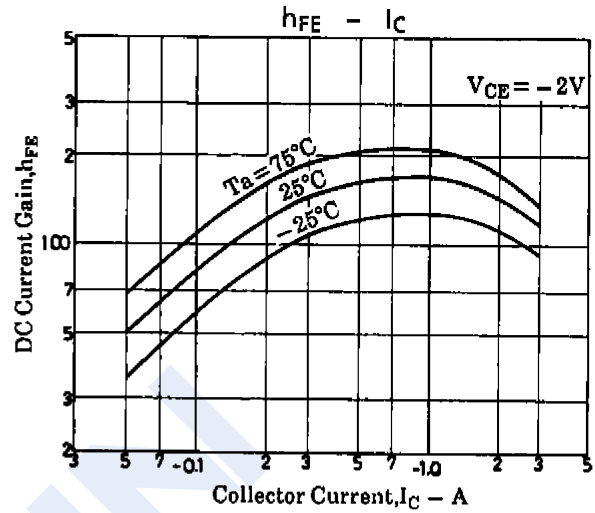
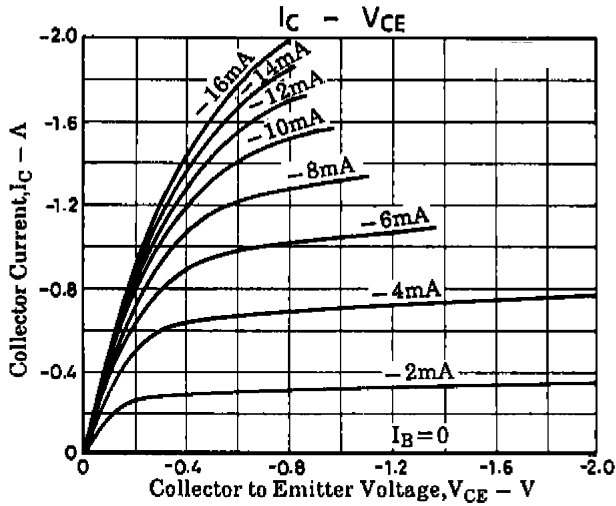
#### ■ Marking

Marking	BN F
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### PNP Transistors

### 2SB1394-HF

■ Typical Characteristics



### PNP Transistors

### 2SB1394-HF

■ Typical Characteristics

