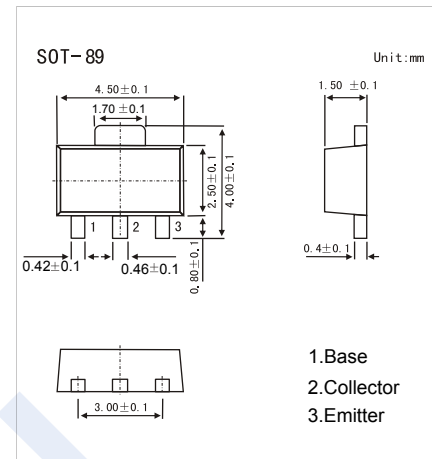


## PNP Transistors

### 2SB1114-HF

#### ■ Features

- High Dc current gain  $h_{FE}=135$  to 600
- Low  $V_{CE(sat)}$   $V_{CE(sat)}=-0.3V$  at 1.5A
- Complementary to 2SD1614-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CBO}$	-20	V
Collector - Emitter Voltage	$V_{CEO}$	-20	
Emitter - Base Voltage	$V_{EBO}$	-6	
Collector Current - Continuous	$I_C$	-2	A
Collector current -Pulse	$I_{CP}$	-3	
Collector Power Dissipation	$P_C$	2	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature range	$T_{stg}$	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CBO}$	$I_C = -100 \mu A, I_E = 0$	-20			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = -1 mA, I_B = 0$	-20			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu A, I_C = 0$	-6			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -16V, I_E = 0$			-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -6V, I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5 A, I_B = -50mA$		-0.3	-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1.5 A, I_B = -50mA$		-1.05	-1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = -6V, I_C = -100 mA$	-0.65	-0.68	-0.75	
DC current gain	$h_{FE}$	$V_{CE} = -2V, I_C = -100 mA$	135	350	600	
		$V_{CE} = -2V, I_C = -2 A$	40			
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		60		$\mu F$
Transition frequency	$f_T$	$V_{CE} = -10V, I_E = 50mA$		180		MHz

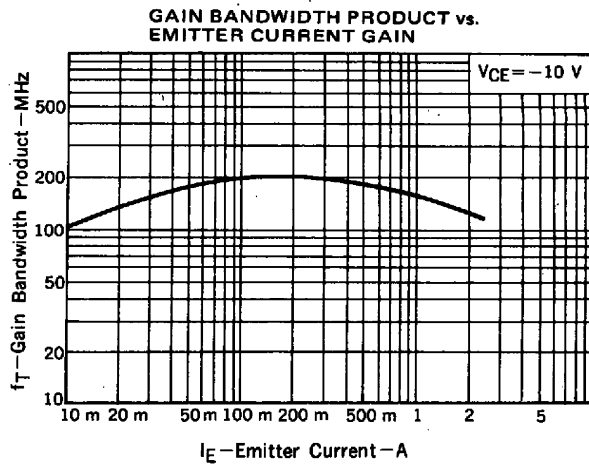
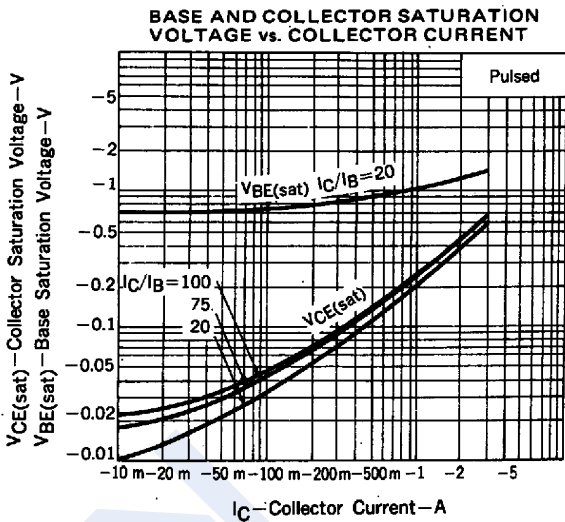
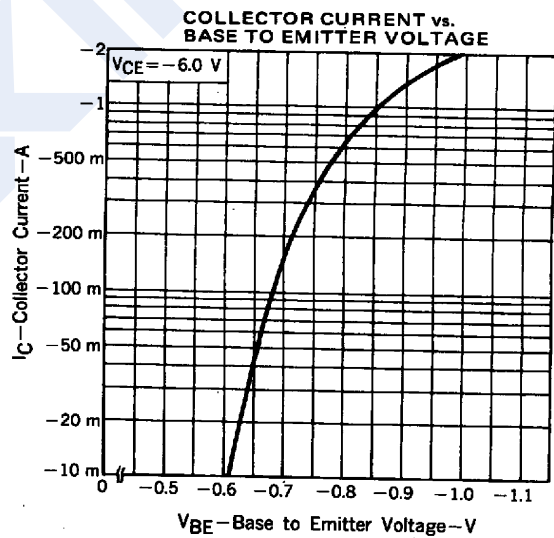
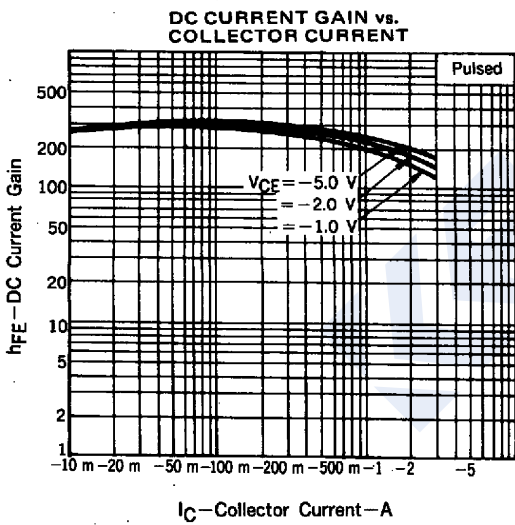
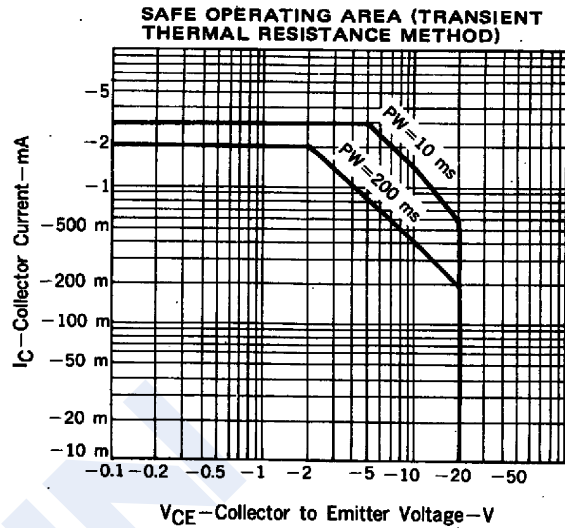
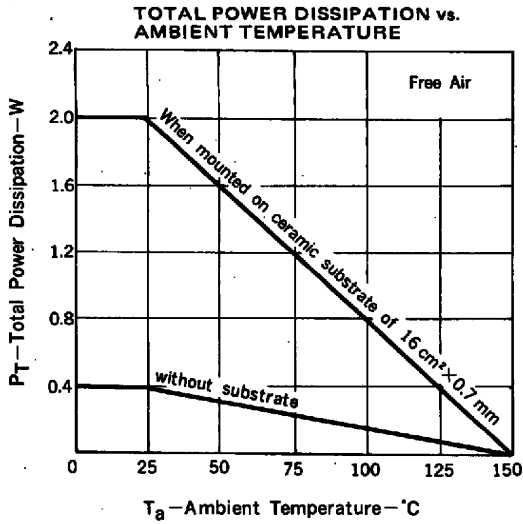
#### ■ Classification of $h_{fe}(1)$

Type	2SB1114-M-HF	2SB1114-L-HF	2SB1114-K-HF
Range	135-270	200-400	300-600
Marking	ZM <sub>F</sub>	ZL <sub>F</sub>	ZK <sub>F</sub>

PNP Transistors

2SB1114-HF

■ Typical Characteristics



## PNP Transistors

### 2SB1114-HF

#### ■ Typical Characteristics

