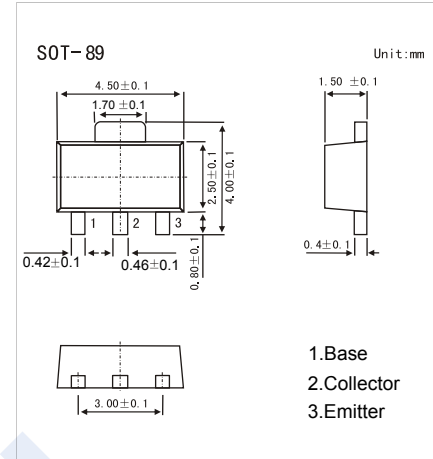


## PNP Transistors

### 2SB1628-HF

#### ■ Features

- High current capacitance
- Low collector saturation voltage
- 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	$V_{CB0}$	-20	V
Collector - Emitter Voltage	$V_{CE0}$	-16	
Emitter - Base Voltage	$V_{EB0}$	-6	
Collector Current - Continuous	$I_C$	-3	A
Collector Current - Pulse	$I_{CP}$	-5	
Collector Power Dissipation	$P_C$	2	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	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-20			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = -1 \text{ mA}$ , $I_B = 0$	-16			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-6			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -20 \text{ V}$ , $I_E = 0$			-100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -6 \text{ V}$ , $I_C = 0$			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2 \text{ A}$ , $I_B = -100 \text{ mA}$ $I_C = -3 \text{ A}$ , $I_B = -150 \text{ mA}$			-0.35 -0.55	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2 \text{ A}$ , $I_B = -100 \text{ mA}$			-1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = -2 \text{ V}$ , $I_C = -50 \text{ mA}$	-0.6		-0.7	
DC current gain	$h_{FE(1)}$	$V_{CE} = -2 \text{ V}$ , $I_C = -500 \text{ mA}$	140		560	
	$h_{FE(2)}$	$V_{CE} = -2 \text{ V}$ , $I_C = -3 \text{ A}$	70			
Turn-on time	$t_{on}$	$I_C = -1.0 \text{ A}$ , $V_{CC} = -10 \text{ V}$ $I_{B1} = -I_{B2} = -0.1 \text{ A}$ $R_L = 10 \Omega$		70		ns
Storage time	$t_{stg}$			110		
Fall time	$t_f$			40		
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		45		pF
Transition frequency	$f_T$	$V_{CE} = -3 \text{ V}$ , $I_E = 500 \text{ mA}$		320		MHz

#### ■ Classification of $h_{FE(1)}$

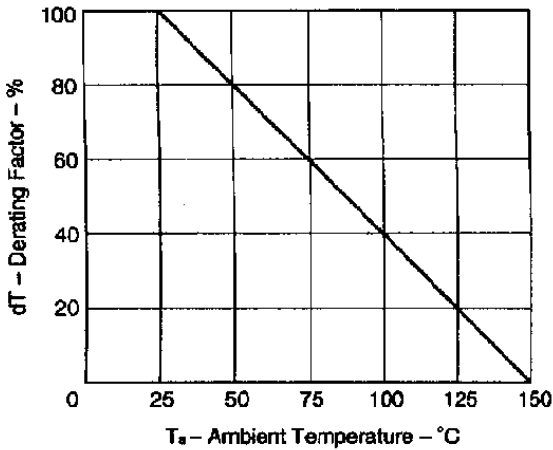
Type	2SB1628-X-HF	2SB1628-Y-HF	2SB1628-Z-HF
Range	140-280	200-400	280-560
Marking	ZX <sub>F</sub>	ZY <sub>F</sub>	F

### PNP Transistors

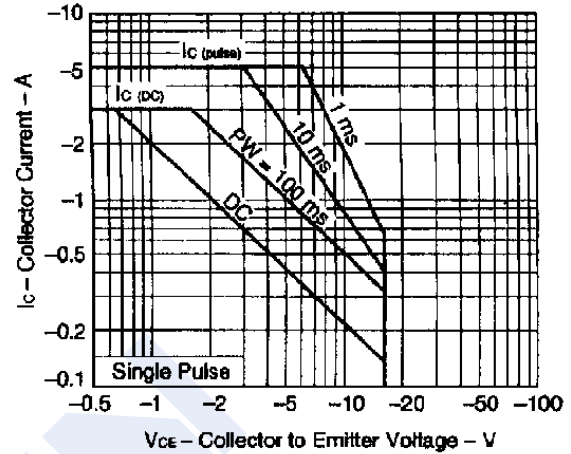
### 2SB1628-HF

■ Typical Characteristics

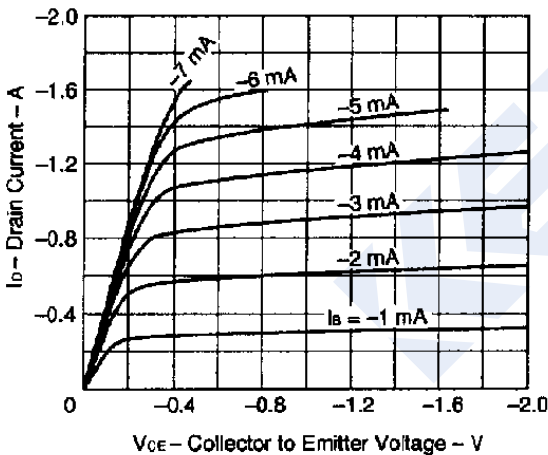
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



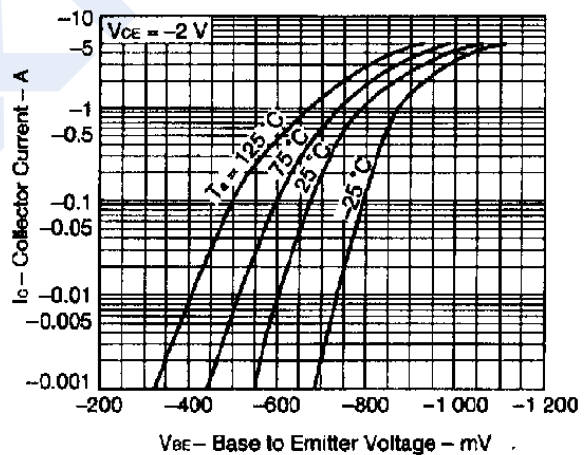
FORWARD BIAS SAFE OPERATING AREA



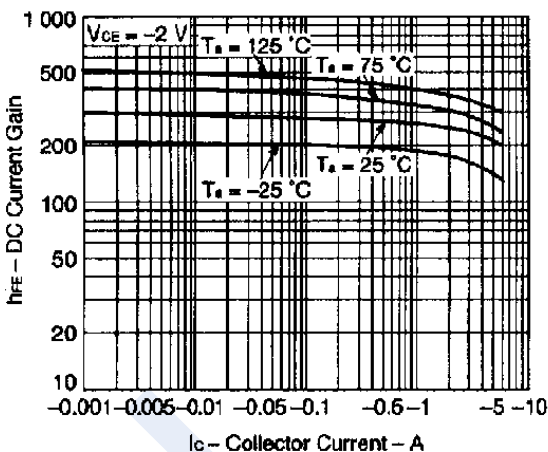
DRAIN CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



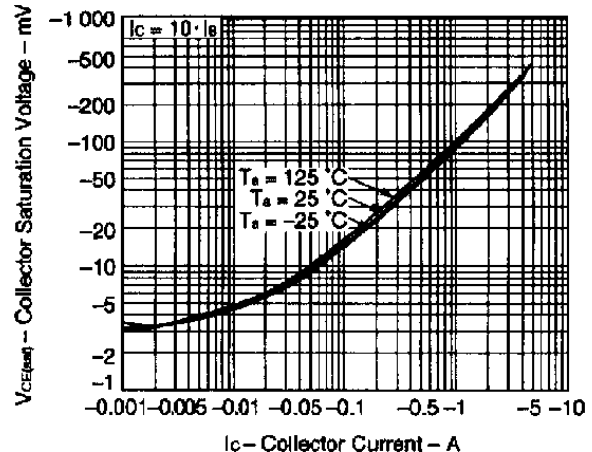
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



PNP Transistors

2SB1628-HF

■ Typical Characteristics

