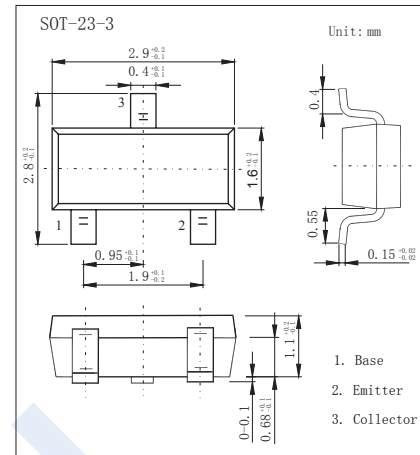


## PNP Transistors

### 2SB736A-HF

#### ■ Features

- High DC current gain  $h_{FE}$ :200(TYP)
- Complimentary to 2SD780A-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	$V_{CB0}$	-80	V
Collector - Emitter Voltage	$V_{CE0}$	-80	
Emitter - Base Voltage	$V_{EB0}$	-5	
Collector Current - Continuous	$I_c$	-300	mA
Collector Power Dissipation	$P_c$	200	mW
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	$V_{CB0}$	$I_c = -100 \mu\text{A}, I_E = 0$	-80			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_c = -1 \text{ mA}, I_B = 0$	-80			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}, I_c = 0$	-5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = -70\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -5\text{V}, I_c = 0$			-0.1	
Collector-emitter saturation voltage (Note.1)	$V_{CE(sat)}$	$I_c = -300 \text{ mA}, I_B = -30 \text{ mA}$		-0.35	-0.6	V
Base - emitter saturation voltage (Note.1)	$V_{BE(sat)}$	$I_c = -300 \text{ mA}, I_B = -30 \text{ mA}$			-1.2	
Base - emitter voltage (Note.1)	$V_{BE}$	$V_{CE} = -6\text{V}, I_c = -10 \text{ mA}$	-600	-660	-700	mV
DC current gain (Note.1)	$h_{FE}$	$V_{CE} = -1 \text{ V}, I_c = -50 \text{ mA}$	110	200	400	
		$V_{CE} = -2\text{V}, I_c = -300 \text{ mA}$	30			
Collector output capacitance	$C_{ob}$	$V_{CB} = -6\text{V}, I_E = 0, f = 1 \text{ MHz}$		13		pF
Transition frequency	$f_T$	$V_{CE} = -6\text{V}, I_E = 10 \text{ mA}$		100		MHz

Note.1: Pulse test : Pulse width  $\leq 350 \mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

#### ■ Classification of $h_{FE}(1)$

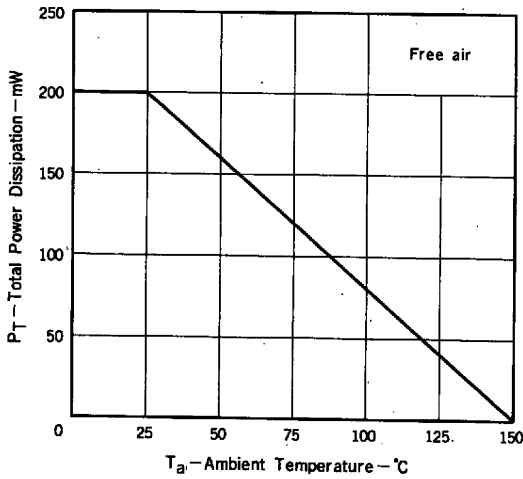
Type	2SB736A-B51-HF	2SB736A-B52-HF	2SB736A-B53-HF	2SB736A-B54-HF	2SB736A-B55-HF
Range	110-180	135-220	170-270	200-320	250-400
Marking	B51 F	B52 F	B53 F	B54 F	B55 F

# PNP Transistors

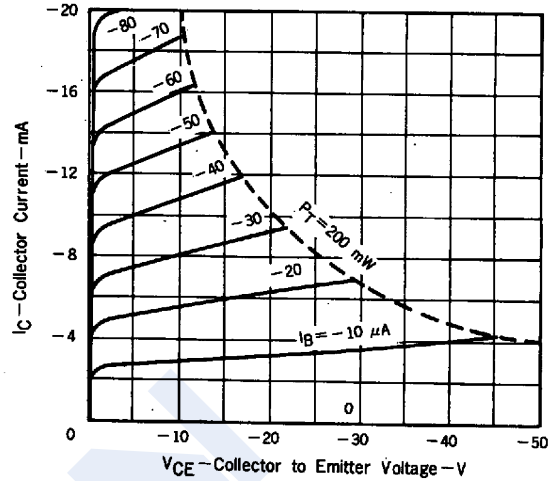
## 2SB736A-HF

■ Typical Characteristics

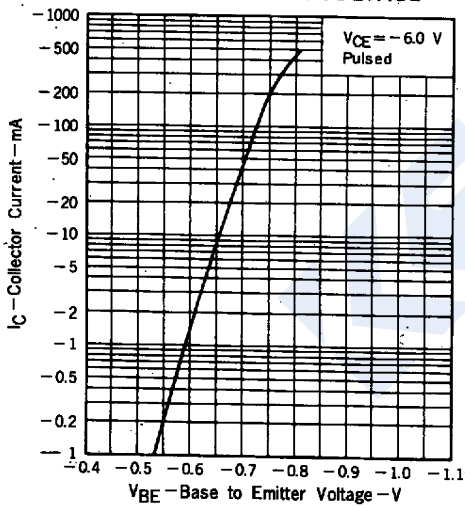
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



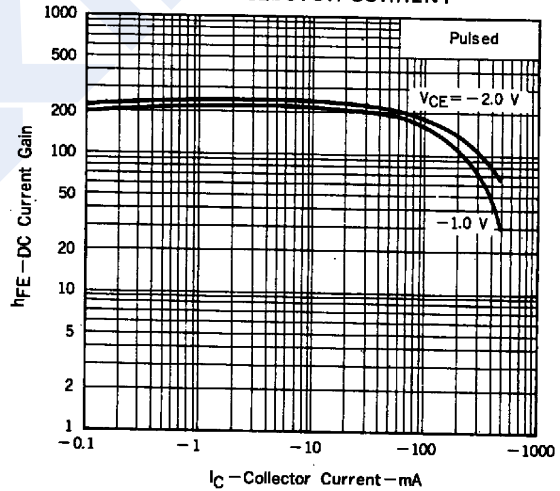
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



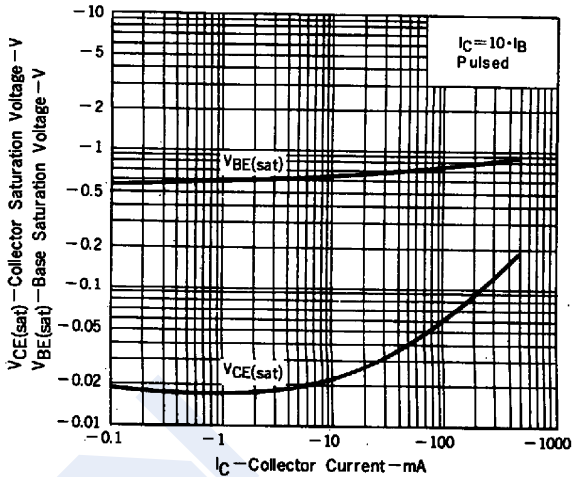
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



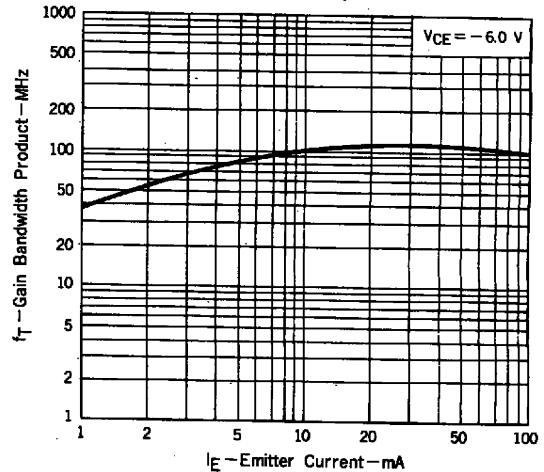
DC CURRENT GAIN vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



## PNP Transistors

### 2SB736A-HF

#### ■ Typical Characteristics

