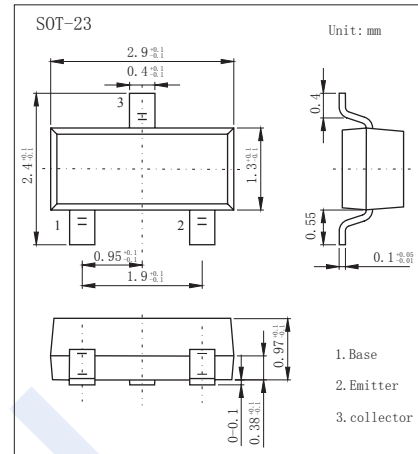


PNP Transistors

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	μA
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 $h_{FE}(1)$

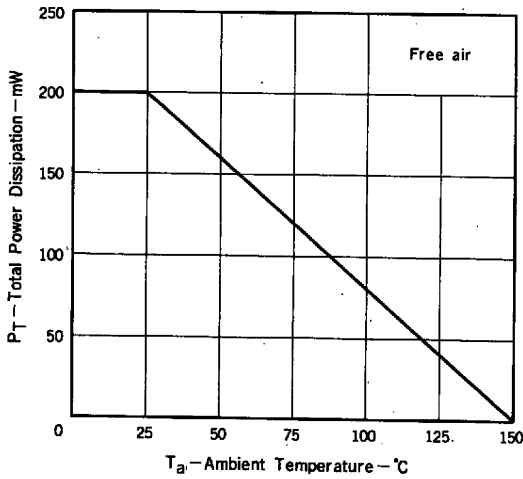
Type	2SB736A-B51-HF	2SB736A-B52-HF	2SB736A-B53-HF	2SB736A-B54-HF	2SB736A-B55-HF
Range	110-180	135-220	170-270	200-320	250-400
Marking	B51 F	B52 F	B53 F	B54 F	B55 F

PNP Transistors

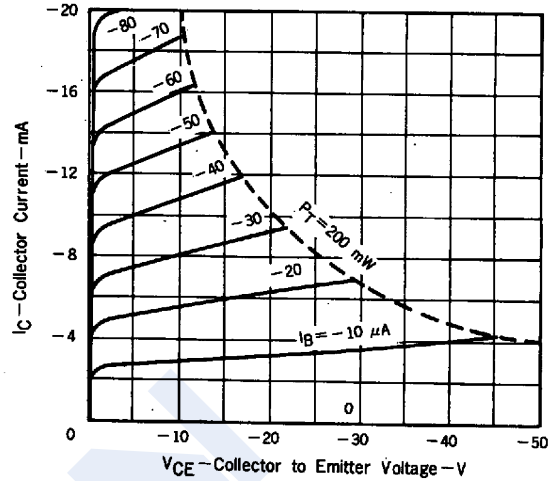
2SB736A-HF

■ Typical Characteristics

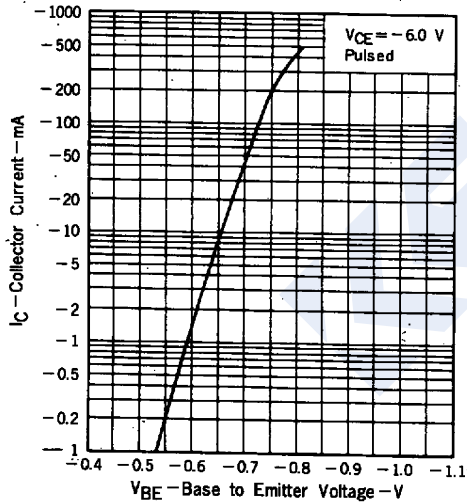
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



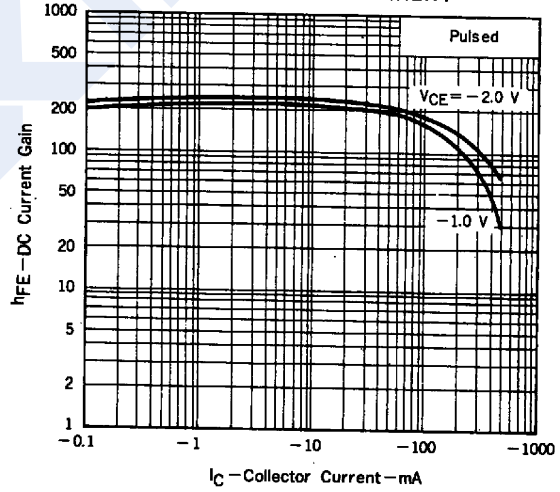
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



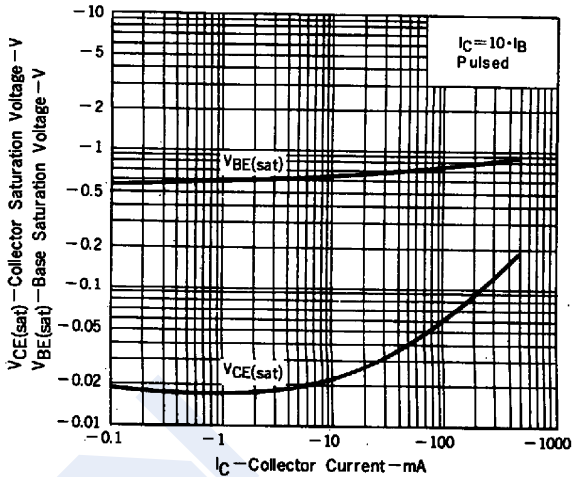
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



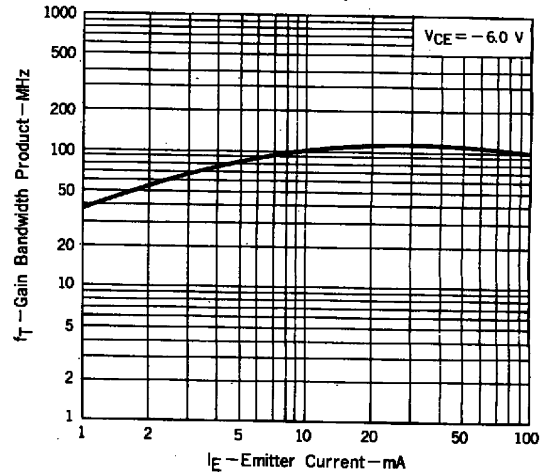
DC CURRENT GAIN vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



PNP Transistors

2SB736A-HF

■ Typical Characteristics

