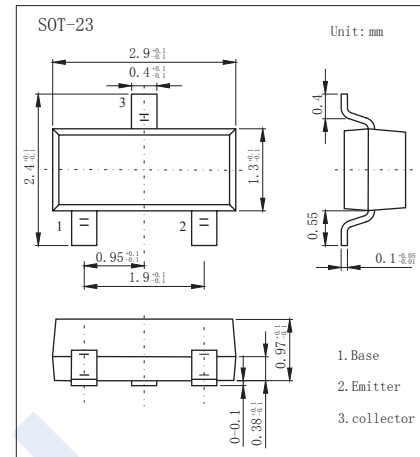


## PNP Transistors

### 2SA1461

#### ■ Features

- High speed switching
- High gain bandwidth product
- Complementary to 2SC3734



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-40	V
Collector - Emitter Voltage	$V_{CE0}$	-40	
Emitter - Base Voltage	$V_{EB0}$	-5	
Collector Current - Continuous	$I_C$	-200	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	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_C = -1 \text{ mA}$ , $I_B = 0$	-40			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -30 \text{ V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4 \text{ V}$ , $I_C = 0$			-0.1	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = -50 \text{ mA}$ , $I_B = -5 \text{ mA}$		-0.1	-0.4	V
Base - emitter saturation voltage *	$V_{BE(sat)}$	$I_C = -50 \text{ mA}$ , $I_B = -5 \text{ mA}$		-0.8	-0.95	
DC current gain *	$h_{FE(1)}$	$V_{CE} = -1 \text{ V}$ , $I_C = -10 \text{ mA}$	75	180	300	
	$h_{FE(2)}$	$V_{CE} = -10 \text{ V}$ , $I_C = -100 \text{ mA}$	25	100		
Turn-on time	$t_{on}$	$V_{CC} = -3 \text{ V}$ , $I_C = -10 \text{ mA}$ , $I_{B1} = -I_{B2} = -1 \text{ mA}$			70	ns
Storage time	$t_{stg}$			110	225	
Turn-off time	$t_{off}$				300	
Collector output capacitance	$C_{ob}$	$V_{CB} = -5 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		2.5	4.5	pF
Transition frequency	$f_T$	$V_{CE} = -20 \text{ V}$ , $I_E = 10 \text{ mA}$	200	510		MHz

\* : Pulsed:  $PW \leq 350 \mu\text{s}$ , Duty Cycle  $\leq 2\%$

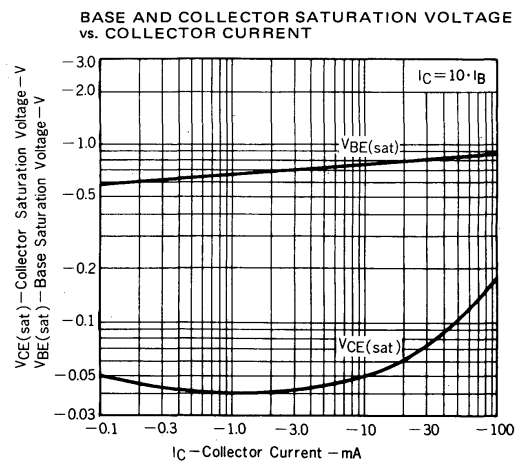
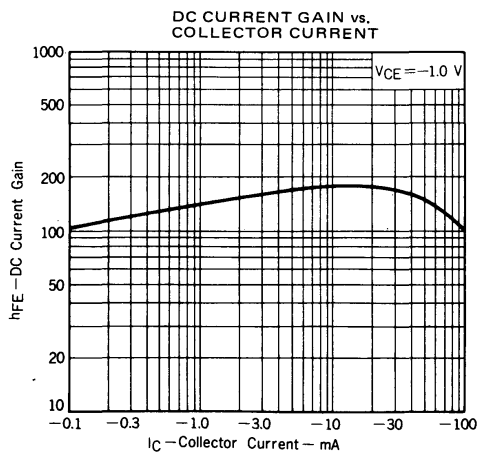
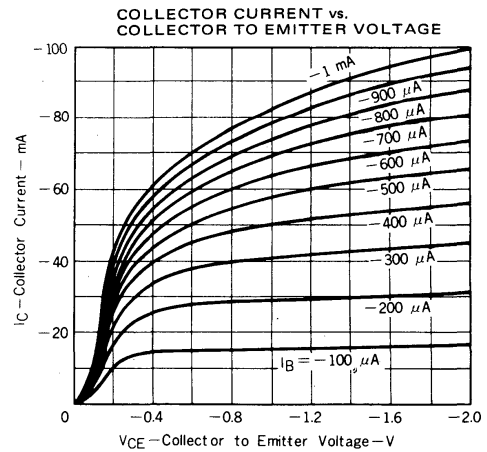
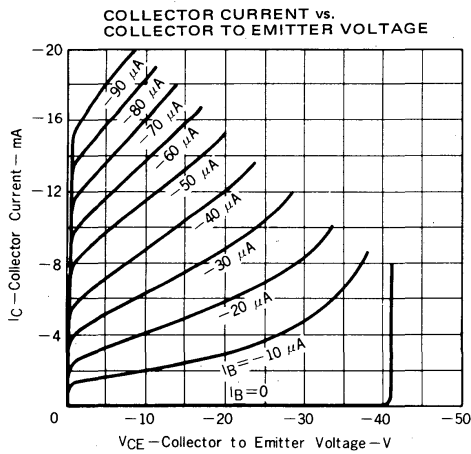
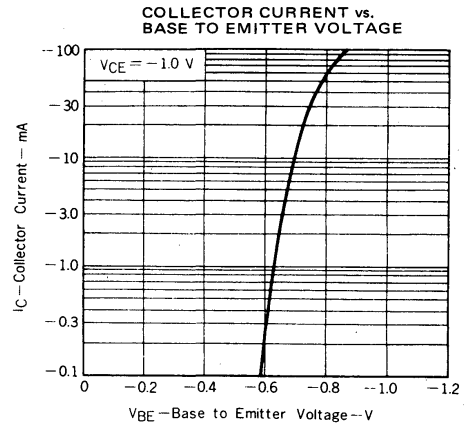
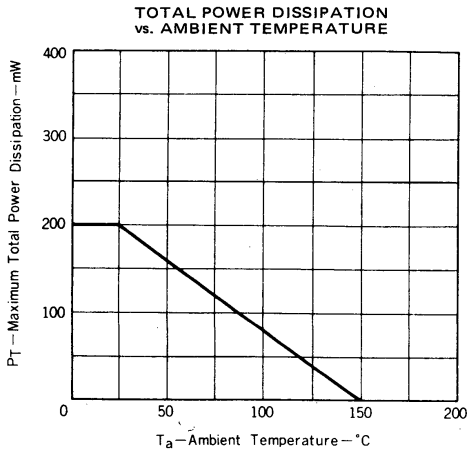
#### ■ Classification of $h_{FE(1)}$

Type	2SA1461-Y22	2SA1461-Y23	2SA1461-Y24
Range	75-150	100-200	150-300
Marking	Y22	Y23	Y24

# PNP Transistors

## 2SA1461

### Typical Characteristics



## PNP Transistors

## 2SA1461

## ■ Typical Characteristics

