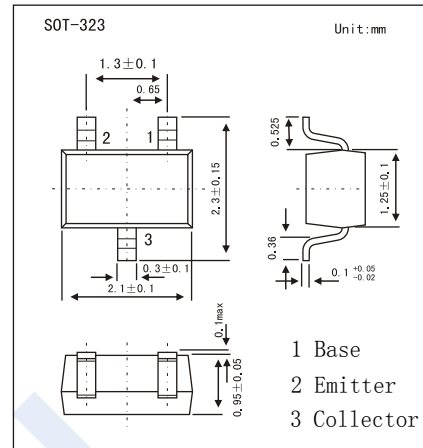


## PNP Transistors

### 2SA1531A

#### ■ Features

- Low noise voltage NV.
- High forward current transfer ratio  $h_{FE}$ .
- Complementary to 2SC3929A



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CBO}$	-55	V
Collector - Emitter Voltage	$V_{CEO}$	-55	
Emitter - Base Voltage	$V_{EBO}$	-5	
Collector Current - Continuous	$I_C$	-50	mA
Collector Power Dissipation	$P_C$	150	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	$V_{CBO}$	$I_C = -100 \mu\text{A}, I_E = 0$	-55			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = -2 \text{ mA}, I_B = 0$	-55			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu\text{A}, I_C = 0$	-5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -50 \text{ V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5 \text{ V}, I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100 \text{ mA}, I_B = -10 \text{ mA}$			-0.6	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100 \text{ mA}, I_B = -10 \text{ mA}$			-1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$		-0.7	-1	
DC current gain	$h_{FE}$	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	180		700	
Noise voltage	NV	$V_{CE} = -10\text{V}, I_C = -1\text{mA}, G_v = 80\text{dB}, R_g = 100\text{k}\Omega, \text{Function} = \text{FLAT}$			150	mV
Transition frequency	$f_T$	$V_{CE} = -10\text{V}, I_E = 2 \text{ mA}, f = 200\text{MHz}$		80		MHz

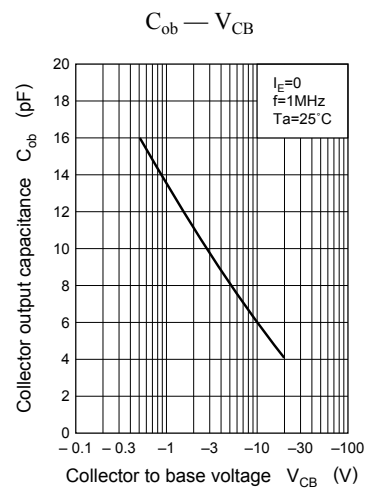
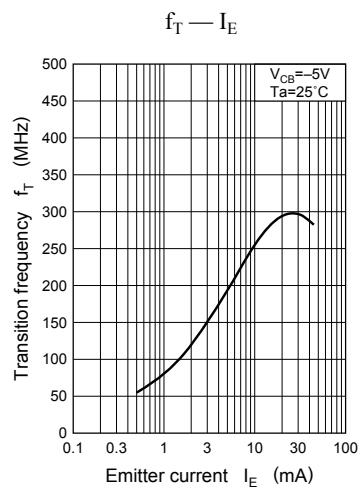
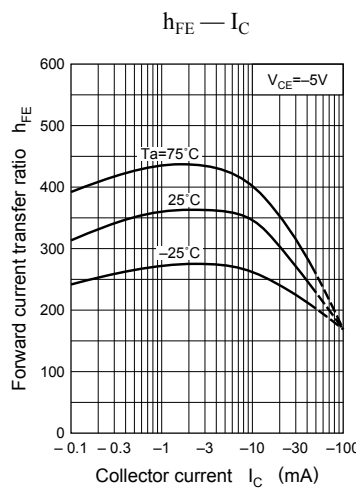
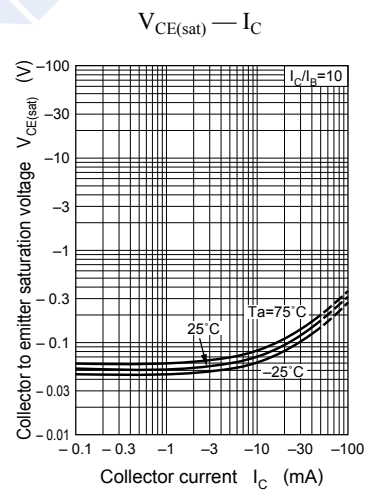
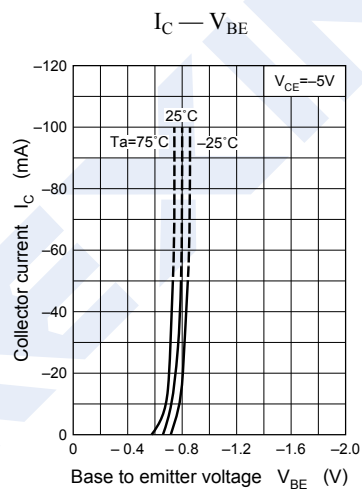
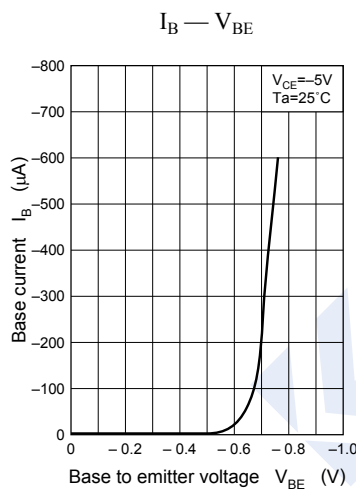
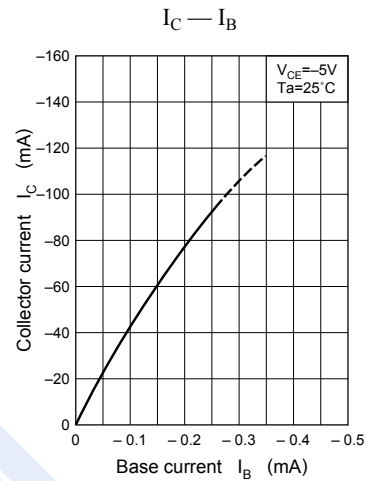
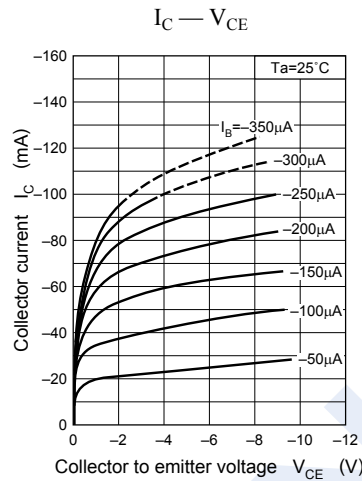
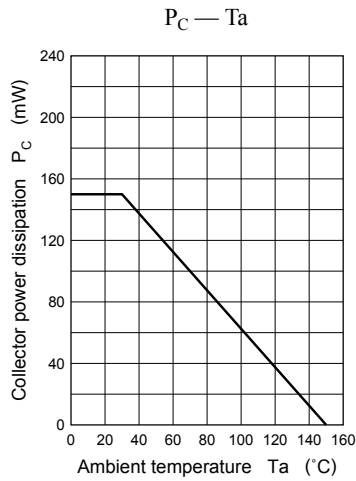
#### ■ Classification of $h_{FE}$

Type	2SA1531A-R	2SA1531A-S	2SA1531A-T
Range	180-360	260-520	360-700
Marking	HR	HS	HT

# PNP Transistors

## 2SA1531A

### Typical Characteristics



## PNP Transistors

### 2SA1531A

■ Typical Characteristics

