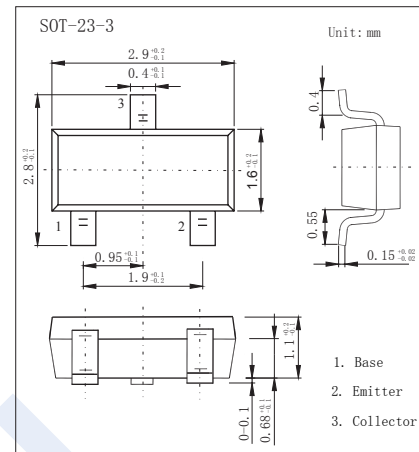


## PNP Transistors

### 2SA1035-HF

#### ■ Features

- Low noise voltage NV.
- High forward current transfer ratio  $h_{FE}$ .
- Complementary to 2SC2406-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	$V_{CB0}$	-55	V
Collector-emitter voltage	$V_{CE0}$	-55	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_c$	-50	mA
Peak collector current	$I_{CP}$	-100	mA
Collector power dissipation	$P_c$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_c = -100 \mu\text{A}$ , $I_E = 0$	-55			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_c = -2 \text{mA}$ , $I_B = 0$	-55			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_c = 0$	-5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -50 \text{V}$ , $I_E = 0$			-100	nA
Collector- emitter cut-off current	$I_{CEO}$	$V_{CE} = -40 \text{V}$ , $I_B = 0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5 \text{V}$ , $I_c = 0$			-100	nA
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	$V_{BE}$	$V_{BE} = -1 \text{V}$ , $I_c = -100 \text{mA}$			-1.0	
DC current gain	$h_{FE}$	$V_{CE} = -5 \text{V}$ , $I_c = -2 \text{mA}$	180		700	
Noise voltage	NV	$V_{CE} = -10 \text{V}$ , $I_c = -1 \text{mA}$ , $G_v = 80 \text{dB}$ $R_g = 100 \text{k}\Omega$ , Function = FLAT			150	mV
Transition frequency	$f_r$	$V_{CB} = -5 \text{V}$ , $I_E = -2 \text{mA}$ , $f = 200 \text{MHz}$		200		MHz

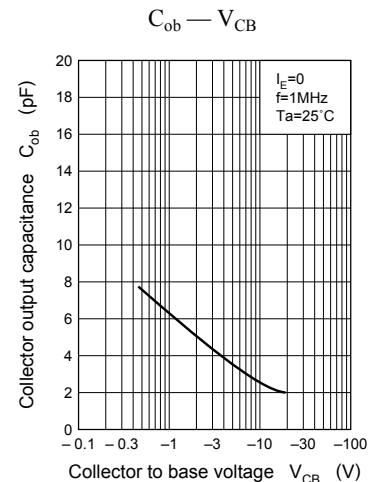
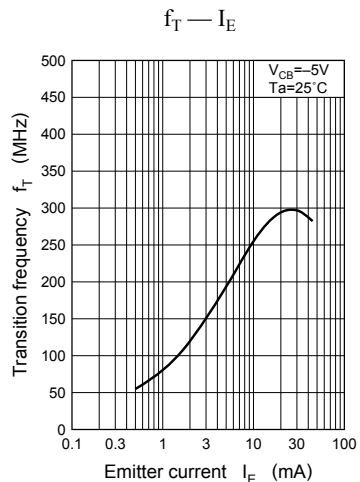
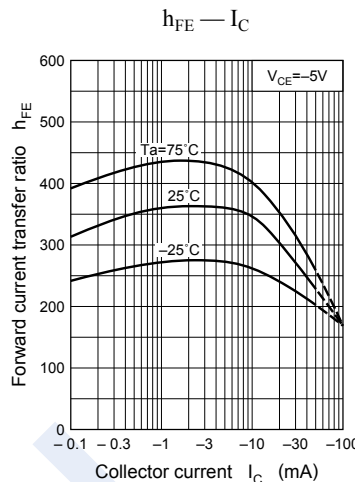
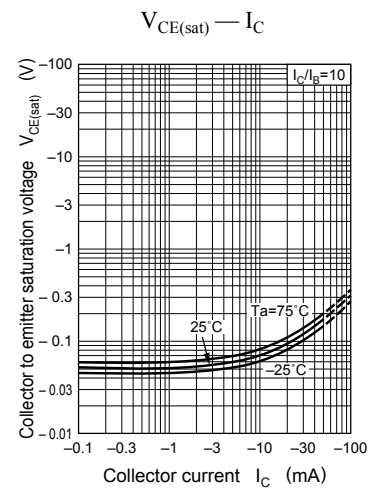
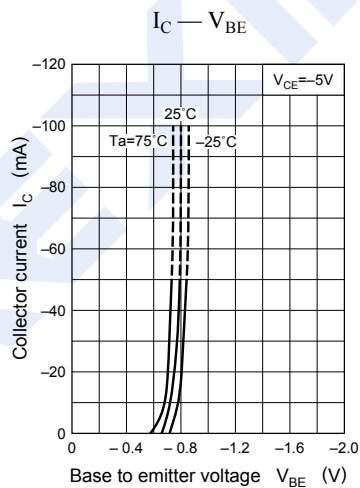
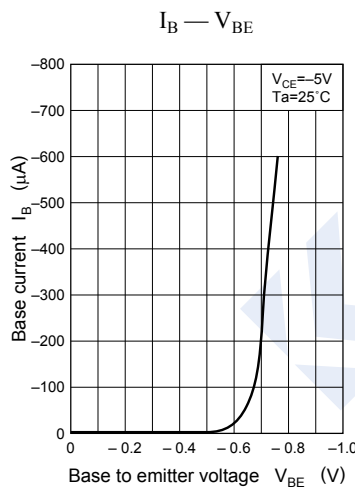
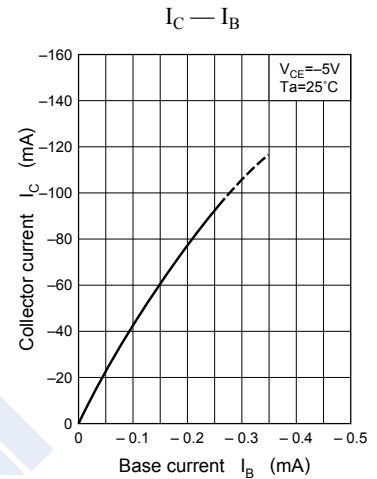
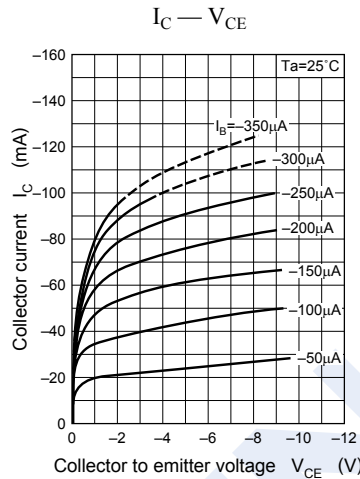
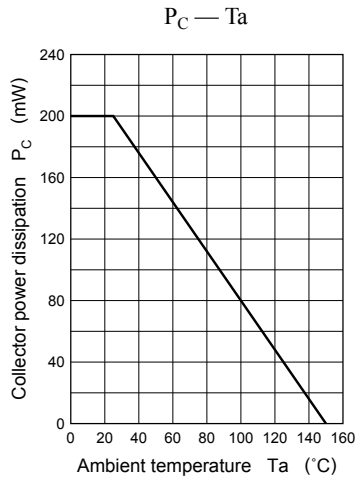
#### ■ Classification of $h_{FE}$

Type	2SA1035-R-HF	2SA1035-S-HF	2SA1035-T-HF
Range	180-360	260-520	360-700
Marking	HR <sub>F</sub>	HS <sub>F</sub>	HT <sub>F</sub>

# PNP Transistors

## 2SA1035-HF

### Typical Characteristics



## PNP Transistors 2SA1035-HF

■ Typical Characteristics

