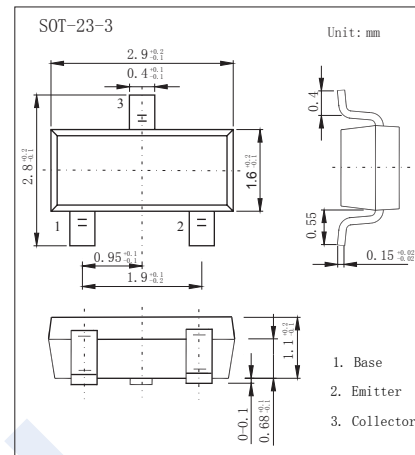


## PNP Transistors

### 2SA1256-HF

#### ■ Features

- High fr (230MHz typ), and small Cre (1.1pF typ).
- Small NF (2.5dB typ).
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	-30	V
Collector-emitter voltage	V <sub>CEO</sub>	-20	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current	I <sub>C</sub>	-30	mA
Collector dissipation	P <sub>C</sub>	150	mW
Junction temperature	T <sub>J</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +125	°C

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>C</sub> = -100 μA, I <sub>E</sub> =0	-30			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>C</sub> = -1 mA, I <sub>B</sub> =0	-20			
Emitter - base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = -100 μA, I <sub>C</sub> =0	-5			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> =0			-100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -4V, I <sub>C</sub> =0			-100	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-20 mA, I <sub>B</sub> =-1mA			0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-20 mA, I <sub>B</sub> =-1mA			1.2	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -6V, I <sub>C</sub> = -1mA	60		270	
Noise figure	NF	V <sub>CE</sub> = -6V, I <sub>C</sub> = -1mA, f=100MHz		2.5		dB
Voltage gain	PG			22		
Base-collector time constant	r <sub>bb</sub> , C <sub>c</sub>	V <sub>CE</sub> = -6V, I <sub>C</sub> = -1mA, f=31.9MHz		11	20	ps
Collector output capacitance	C <sub>re</sub>	V <sub>CB</sub> = -6V, f=10MHz		1.1	1.7	pF
Transition frequency	f <sub>t</sub>	V <sub>CE</sub> = -6V, I <sub>C</sub> = -1mA	150	230		MHz

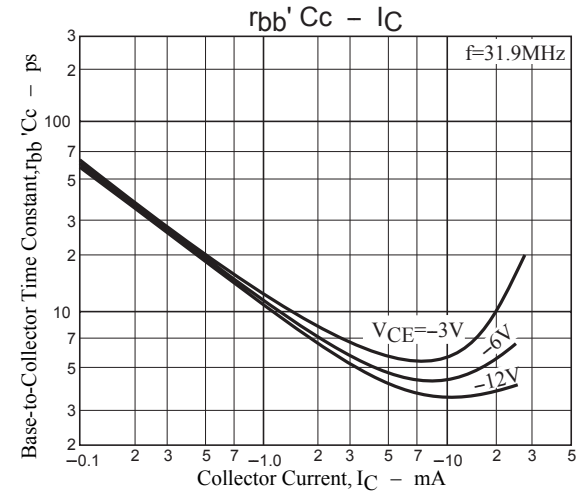
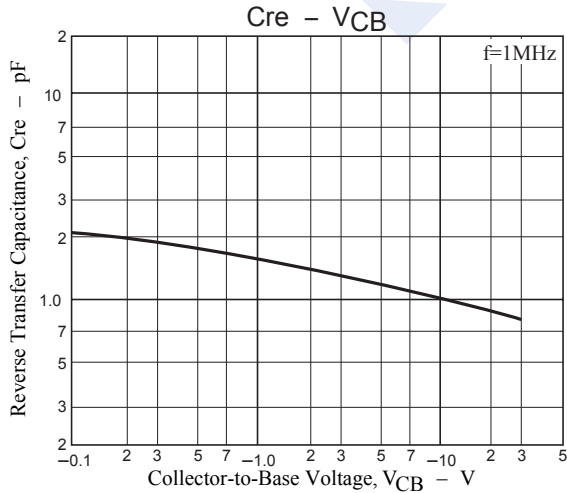
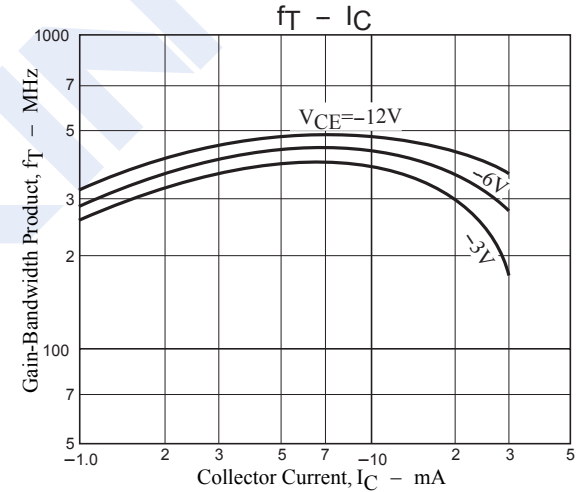
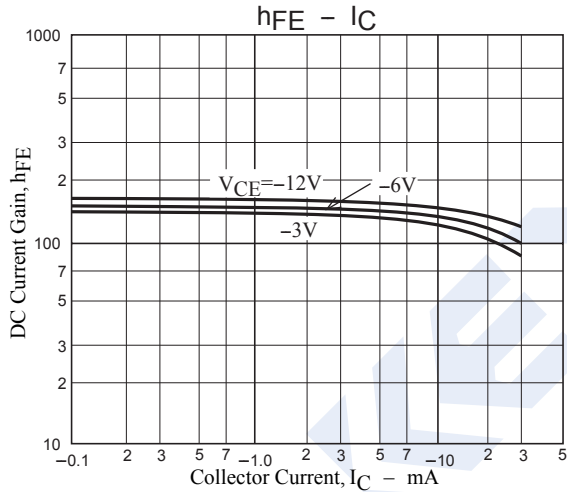
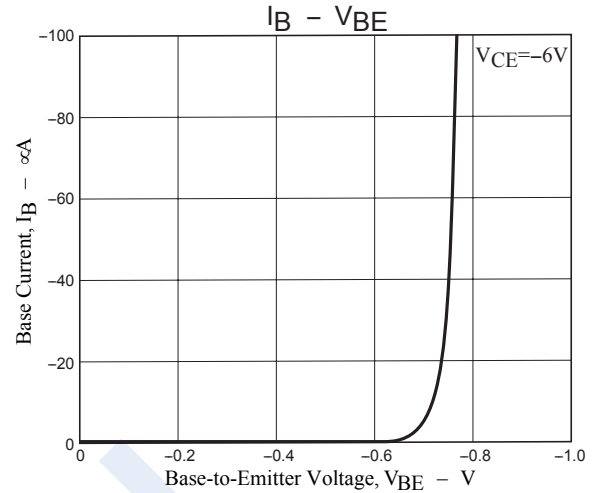
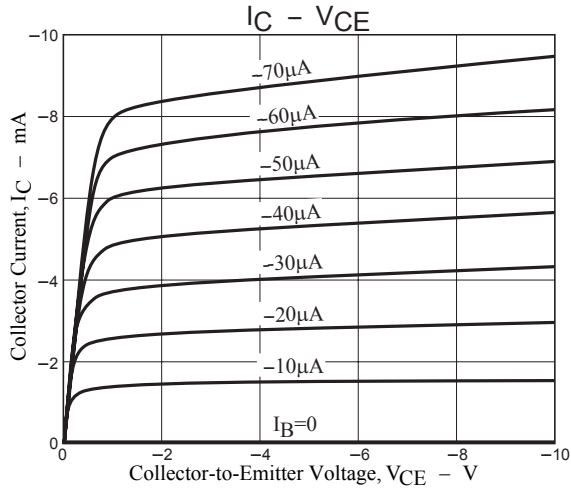
#### ■ Classification of h<sub>FE</sub>

Type	2SA1256-E3-HF	2SA1256-E4-HF	2SA1256-E5-HF
Range	60-120	90-180	135-270
Marking	E3 <sub>F</sub>	E4 <sub>F</sub>	E5 <sub>F</sub>

### PNP Transistors

### 2SA1256-HF

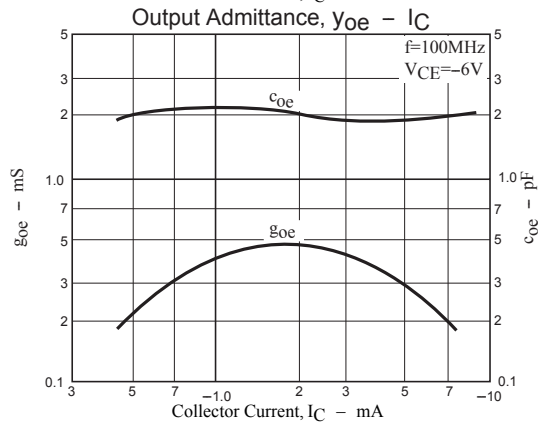
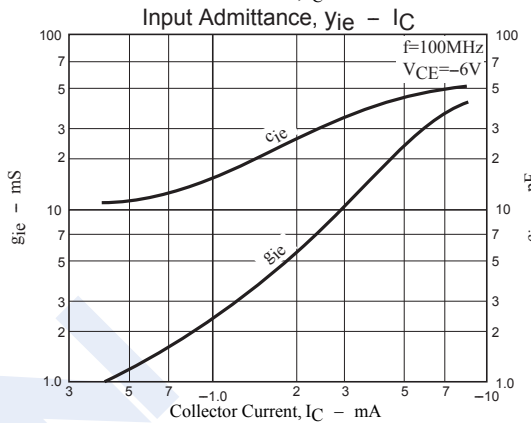
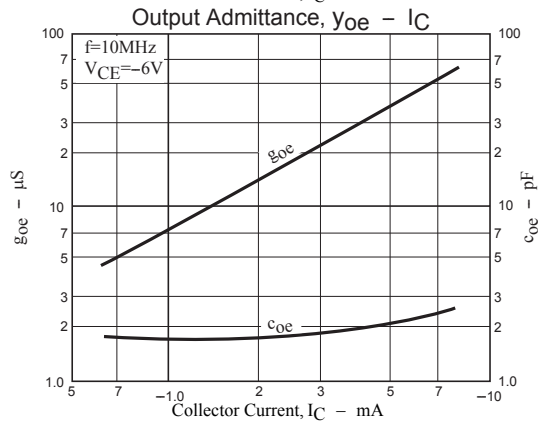
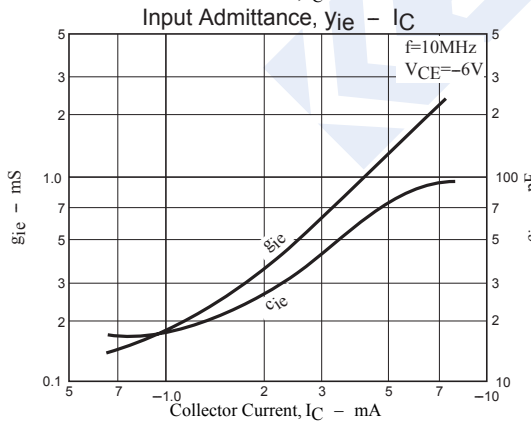
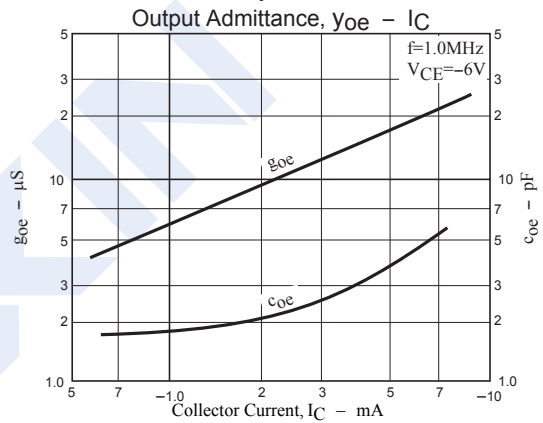
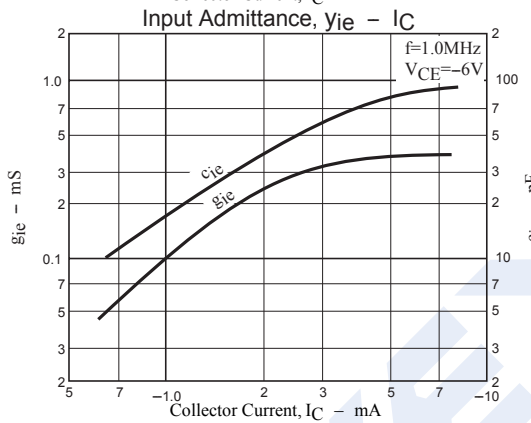
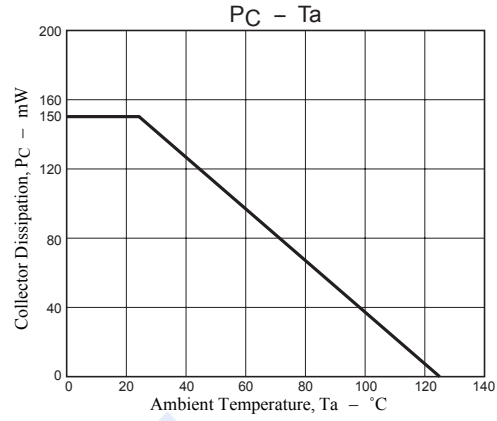
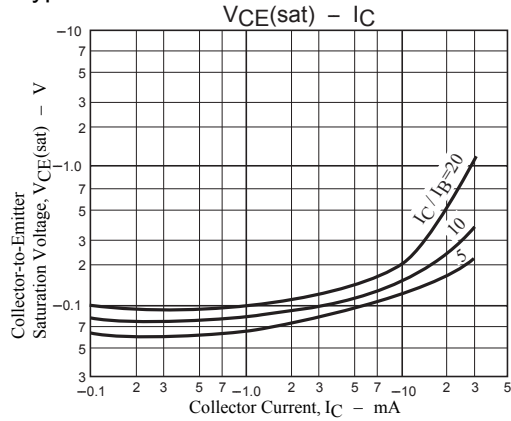
■ Typical Characteristics



# PNP Transistors

## 2SA1256-HF

■ Typical Characteristics



### PNP Transistors

### 2SA1256-HF

■ Typical Characteristics

