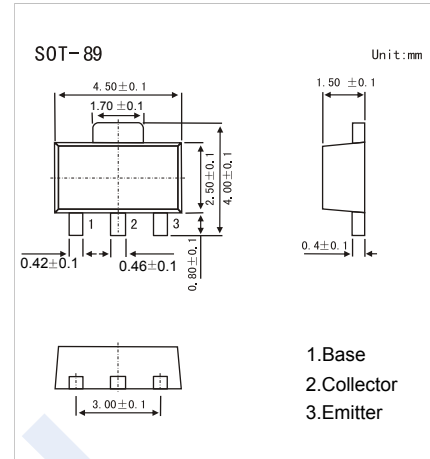


## PNP Transistors

### 2SA1766



#### ■ Features

- Adoption of FBET, MBIT processes.
- High DC current gain ( $h_{FE}=500$  to  $1200$ ).
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- High  $V_{EBO}$ .

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CBO}$	-30	V
Collector - Emitter Voltage	$V_{CEO}$	-25	
Emitter - Base Voltage	$V_{EBO}$	-15	
Collector Current - Continuous	$I_C$	-300	mA
Collector Current - Pulse	$I_{CP}$	-500	
Base Current	$I_B$	-60	
Collector Power Dissipation (Note.1)	$P_C$	1.3	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-55 to 150	

Note.1: Mounted on ceramic board ( $250\text{mm}^2 \times 0.8\text{mm}$ )

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CBO}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-30			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$	-25			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-15			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -20 \text{ V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -10 \text{ V}$ , $I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -200 \text{ mA}$ , $I_B = -4 \text{ mA}$		-0.12	-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -200 \text{ mA}$ , $I_B = -4 \text{ mA}$		-0.77	-1.1	
DC current gain	$h_{FE(1)}$	$V_{CE} = -5\text{V}$ , $I_C = -10 \text{ mA}$	500	800	1200	
	$h_{FE(2)}$	$V_{CE} = -5\text{V}$ , $I_C = -200 \text{ mA}$	200			
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}$ , $f = 1\text{MHz}$		12		pF
Transition frequency	$f_T$	$V_{CE} = -10\text{V}$ , $I_C = -10 \text{ mA}$		100		MHz

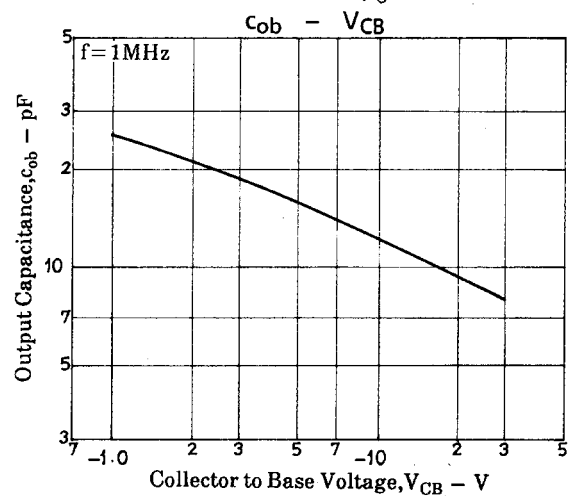
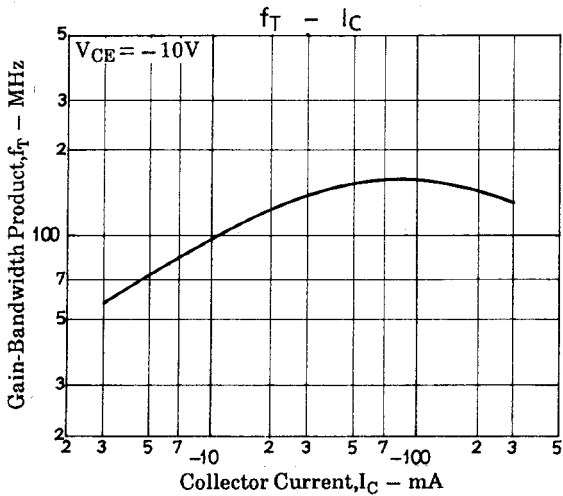
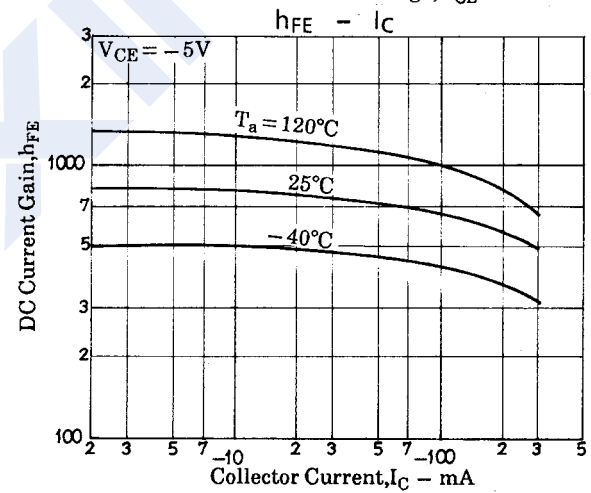
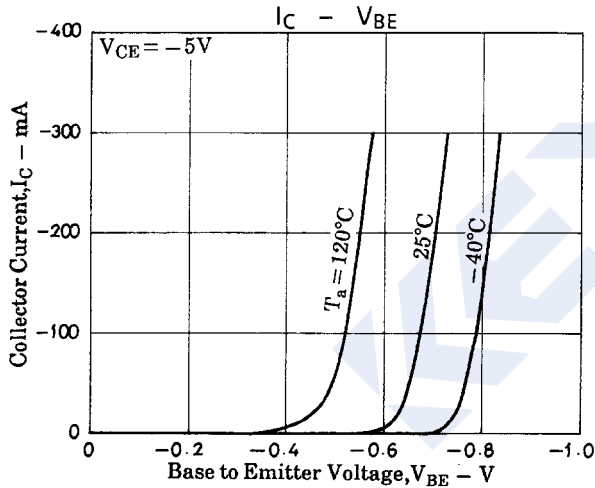
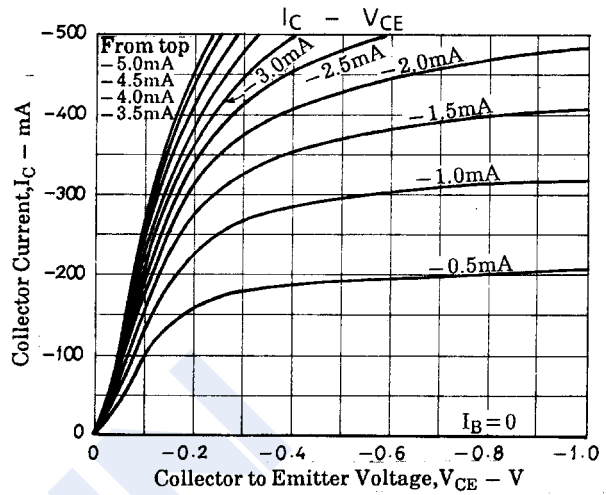
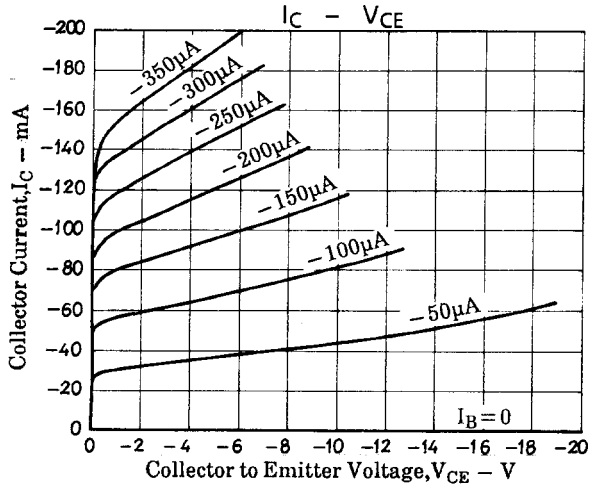
#### ■ Marking

Marking	AL
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# PNP Transistors

## 2SA1766

■ Typical Characteristics



### PNP Transistors

### 2SA1766

■ Typical Characteristics

