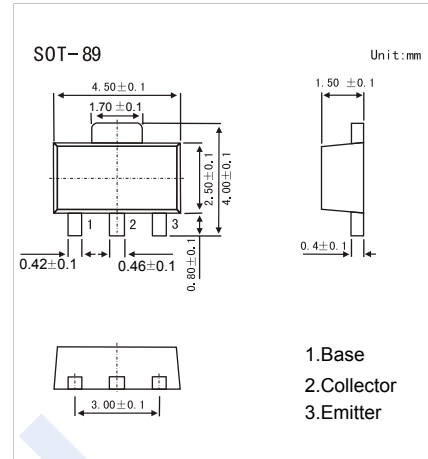


## PNP Transistors

### 2SA1946

#### ■ Features

- Low collector saturation voltage
- High  $f_T$ ,  $f_T=180\text{MHz}$ (typ)
- High collector current  $I_{CM}=-1\text{A}$
- Small package for mounting
- Complements to 2SC5212



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-25	V
Collector - Emitter Voltage	$V_{CEO}$	-20	
Emitter - Base Voltage	$V_{EBO}$	-4	
Collector Current - Continuous	$I_C$	-0.7	A
Collector Current - Pulse	$I_{CM}$	-1	
Collector Power Dissipation	$P_C$	0.5	W
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	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-25			V
Collector-emitter breakdown voltage	$V_{CEO}$	$I_C = -1 \text{mA}$ , $R_{BE} = \infty$	-20			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-4			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -25 \text{V}$ , $I_E = 0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4 \text{V}$ , $I_C = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500 \text{mA}$ , $I_B = -25 \text{mA}$		-0.25	-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500 \text{mA}$ , $I_B = -25 \text{mA}$			-1.2	
DC current gain	$h_{FE}$	$V_{CE} = -4 \text{V}$ , $I_C = -100 \text{mA}$	150		800	
Transition frequency	$f_T$	$V_{CE} = -6 \text{V}$ , $I_E = 10 \text{mA}$		180		MHz

#### ■ Classification of $h_{FE}$

Type	2SA1946-E	2SA1946-F	2SA1946-G
Range	150-300	250-500	400-800
Marking	AAE	AAF	AAG

# PNP Transistors

## 2SA1946

■ Typical Characteristics

