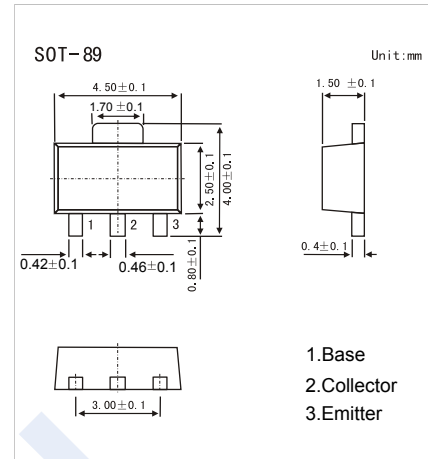


## PNP Transistors

### 2SA1947-HF

#### ■ Features

- High  $f_T$ ,  $f_T=100\text{MHz}(\text{typ})$
- High collector current  $I_{CM}=-1.5\text{A}$
- Small package for mounting
- Complements to 2SC5214-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	$V_{CB0}$	-30	V
Collector - Emitter Voltage	$V_{CE0}$	-25	
Emitter - Base Voltage	$V_{EB0}$	-4	
Collector Current - Continuous	$I_C$	-1	A
Collector Current - Pulse	$I_{CM}$	-1.5	
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	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-30			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_C = -1 \text{mA}$ , $R_{BE} = \infty$	-25			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-4			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = -25 \text{V}$ , $I_E = 0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -4 \text{V}$ , $I_C = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = -500 \text{mA}$ , $I_B = -25 \text{mA}$			-0.5	V
Base - emitter saturation voltage	$V_{BE(\text{sat})}$	$I_C = -500 \text{mA}$ , $I_B = -25 \text{mA}$			-1.2	
DC current gain	$h_{FE}$	$V_{CE} = -1 \text{V}$ , $I_C = -500 \text{mA}$	55		300	
Transition frequency	$f_T$	$V_{CE} = -6 \text{V}$ , $I_E = 10 \text{mA}$		100		MHz

#### ■ Classification of $h_{FE}$

Type	2SA1947-C-HF	2SA1947-D-HF	2SA1947-E-HF
Range	55-110	90-180	150-300
Marking	ABC <sub>F</sub>	ABD <sub>F</sub>	ABE <sub>F</sub>

### PNP Transistors

### 2SA1947-HF

■ Typical Characteristics

