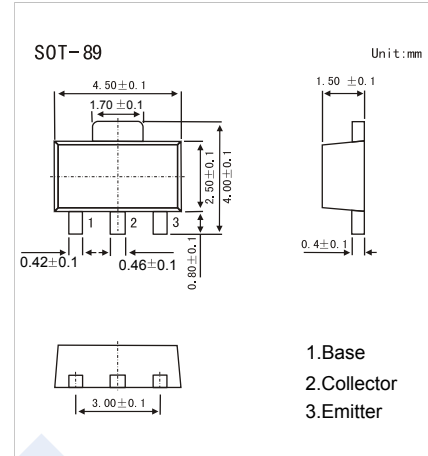


## PNP Transistors

## 2SA1729-HF

## ■ Features

- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Small-sized package.
- 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	$V_{CB0}$	-50	V
Collector - Emitter Voltage	$V_{CE0}$	-40	
Emitter - Base Voltage	$V_{EB0}$	-5	
Collector Current - Continuous	$I_c$	-1.5	A
Collector Current -Pulse	$I_{cp}$	-3	
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 (250mm<sup>2</sup> X 0.8mm)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_c = -100 \mu\text{A}$ , $I_E = 0$	-50			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_c = -1 \text{ mA}$ , $R_{BE} = \infty$	-40			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_c = 0$	-5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = -40 \text{ V}$ , $I_E = 0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -3 \text{ V}$ , $I_c = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = -800 \text{ mA}$ , $I_B = -40 \text{ mA}$		-0.3	-0.8	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = -800 \text{ mA}$ , $I_B = -40 \text{ mA}$		-0.9	-1.3	
DC current gain	$h_{FE(1)}$	$V_{CE} = -2 \text{ V}$ , $I_c = -100 \text{ mA}$	70		280	
	$h_{FE(2)}$	$V_{CE} = -2 \text{ V}$ , $I_c = -1.5 \text{ A}$	25			
Turn-on Time	$t_{on}$	See specified Test Circuit		50	100	ns
Storage time	$t_{stg}$			120	220	
Turn-off time	$t_{off}$			150	300	
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}$ , $f = 1 \text{ MHz}$		18		pF
Transition frequency	$f_T$	$V_{CE} = -2 \text{ V}$ , $I_c = -100 \text{ mA}$		300		MHz

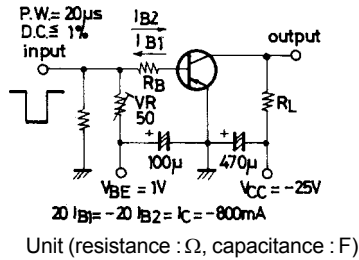
■ Classification of  $h_{FE(1)}$ 

Type	2SA1729-Q-HF	2SA1729-R-HF	2SA1729-S-HF
Range	70-140	100-200	140-280
Marking	AGQ <sub>F</sub>	AGR <sub>F</sub>	AGS <sub>F</sub>

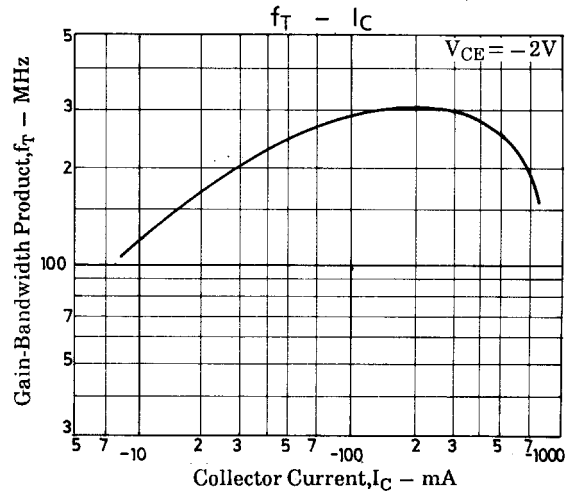
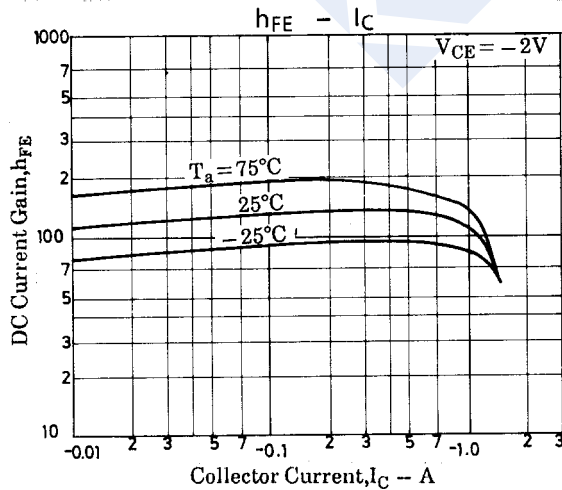
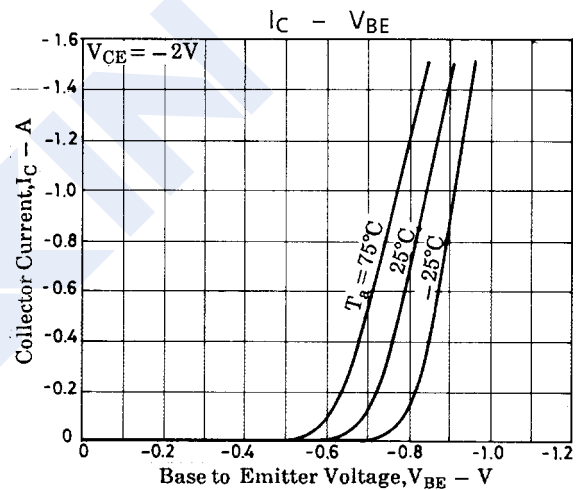
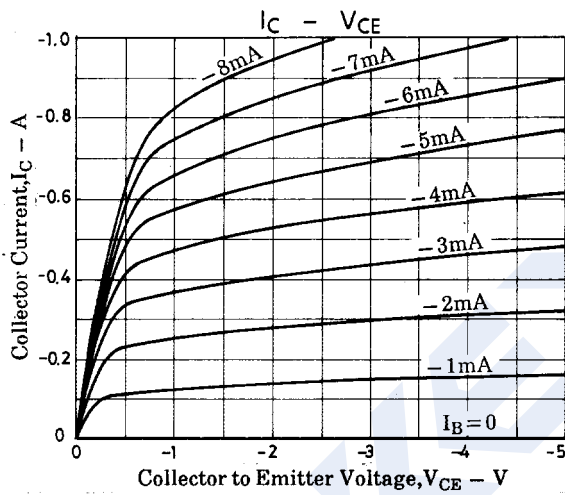
### PNP Transistors

### 2SA1729-HF

#### Switching Time Test Circuit



#### Typical Characteristics



### PNP Transistors

### 2SA1729-HF

■ Typical Characteristics

