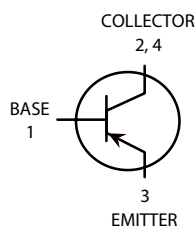
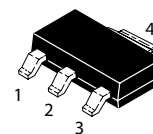


### PNP Silicon Epitaxial Transistor

 Lead(Pb)-Free



1.BASE  
2.COLLECTOR  
3.EMITTER  
4.COLLECTOR



**SOT-223**

#### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Rating	Symbol	Value	Unit
Collector to Base Voltage	V <sub>CBO</sub>	-25	V
Collector to Emitter Voltage	V <sub>CEO</sub>	-20	V
Collector to Base Voltage	V <sub>EBO</sub>	-5.0	V
Collector Current	I <sub>C</sub>	-1.0	A
Total Device Dissipation T <sub>A</sub> =25°C	P <sub>D</sub>	1.5	W
Junction Temperature	T <sub>j</sub>	+150	°C
Storage Temperature	T <sub>stg</sub>	-65 to +150	°C

#### Device Marking

BCP69 = BCP69

#### ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Max	Unit
Collector-Base Breakdown Voltage I <sub>C</sub> =-100μA, I <sub>E</sub> =0	BV <sub>CBO</sub>	-25	-	-	V
Collector-Emitter Breakdown Voltage I <sub>C</sub> =-1mA, I <sub>B</sub> =0	BV <sub>CEO</sub>	-20	-	-	V
Emitter-Base Breakdown Voltage I <sub>E</sub> =-10μA, I <sub>C</sub> =0	BV <sub>EBO</sub>	-5.0	-	-	V
Collector Cut-Off Current V <sub>CB</sub> =-25V, I <sub>E</sub> =0	I <sub>CBO</sub>	-	-	-10	μA
Emitter-Cut-Off Current V <sub>EB</sub> =-5V, I <sub>C</sub> =0	I <sub>EBO</sub>	-	-	-10	μA

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$  Unless otherwise noted)

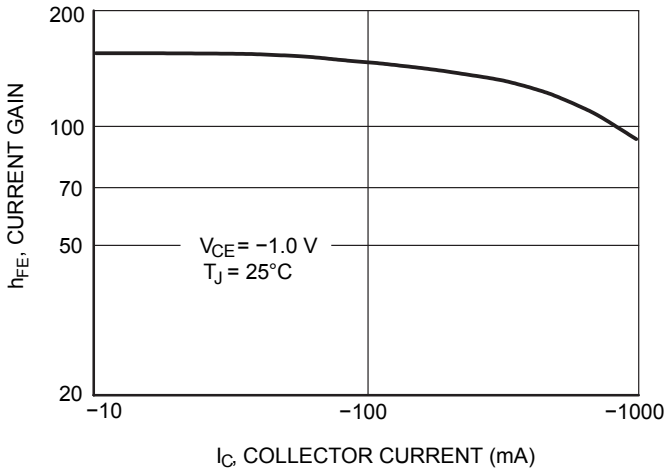
Characteristic	Symbol	Min	Typ	Max	Unit
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**ON CHARACTERISTICS<sup>(1)</sup>**

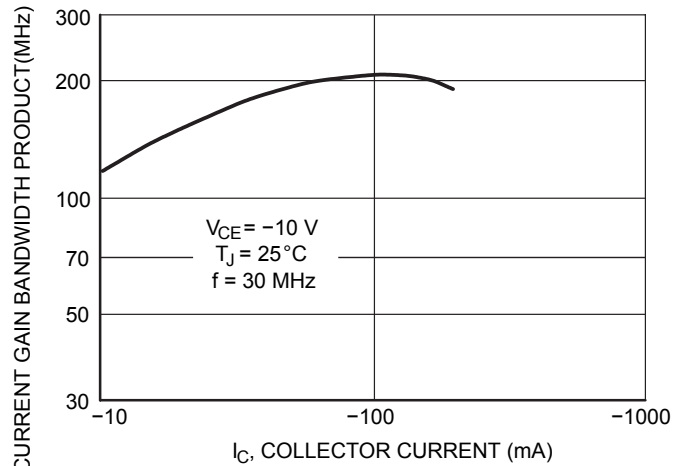
DC Current Gain $V_{CE}=-10\text{V}, I_C=-5\text{mA}$ $V_{CE}=-1\text{V}, I_C=-500\text{mA}$ $V_{CE}=-1\text{V}, I_C=-1\text{A}$	$h_{FE1}$ $h_{FE2}$ $h_{FE3}$	50 85 60	- - -	- 375 -	-
Collector-Emitter Saturation Voltage $I_C=-1\text{A}, I_B=-100\text{mA}$	$V_{CE(sat)}$	-	-	-500	mV
Base-Emitter On Voltage $V_{CE}=-1\text{V}, I_C=-1\text{A}$	$V_{BE(on)}$	-	-	-1.0	V
Transition Frequency $V_{CE}=-10\text{V}, I_C=-100\text{mA}, f=50\text{MHz}$	$f_T$	-	60	-	MHz

Note 1. Pulse Test : Pulse width < 380 $\mu\text{s}$ , Duty cycle  $\leq$  2%.

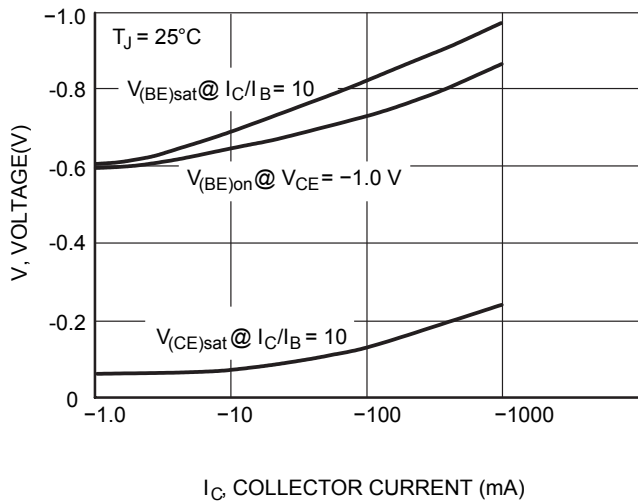
## Typical Characteristics



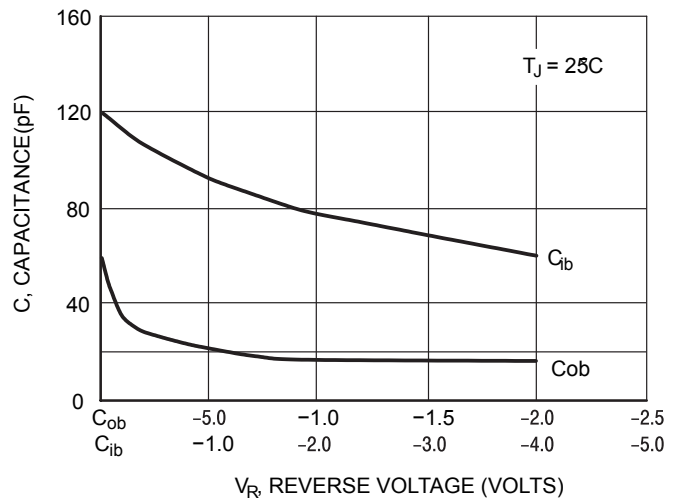
**Fig.1 DC Current Gain**



**Fig.3 Current Gain Bandwidth Product**



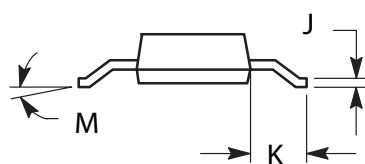
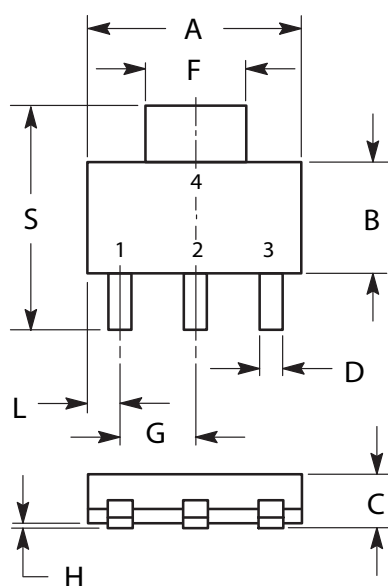
**Fig.2 Saturation and "ON" Voltages**



**Fig.4 Capacitances**

## SOT-223 Outline Dimensions

unit:mm



DIM	MILLIMETERS	
	MIN	MAX
A	6.30	6.70
B	3.30	3.70
C	1.50	1.75
D	0.60	0.89
F	2.90	3.20
G	2.20	2.40
H	0.020	0.100
J	0.24	0.35
K	1.50	2.00
L	0.85	1.05
M	0°	10°
S	6.70	7.30