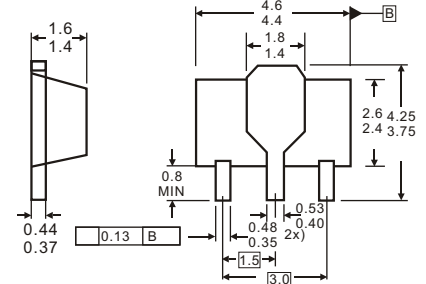




1. BASE
2. COLLECTOR
3. EMITTER

**SOT-89**


Dimensions in inches and (millimeters)

**Features**

- ◇ Switching and amplification in high voltage  
Applications such as telephony
- ◇ Low current(max. 600mA)
- ◇ High voltage(max.180v)

**Marking: 1G6**
**MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)**

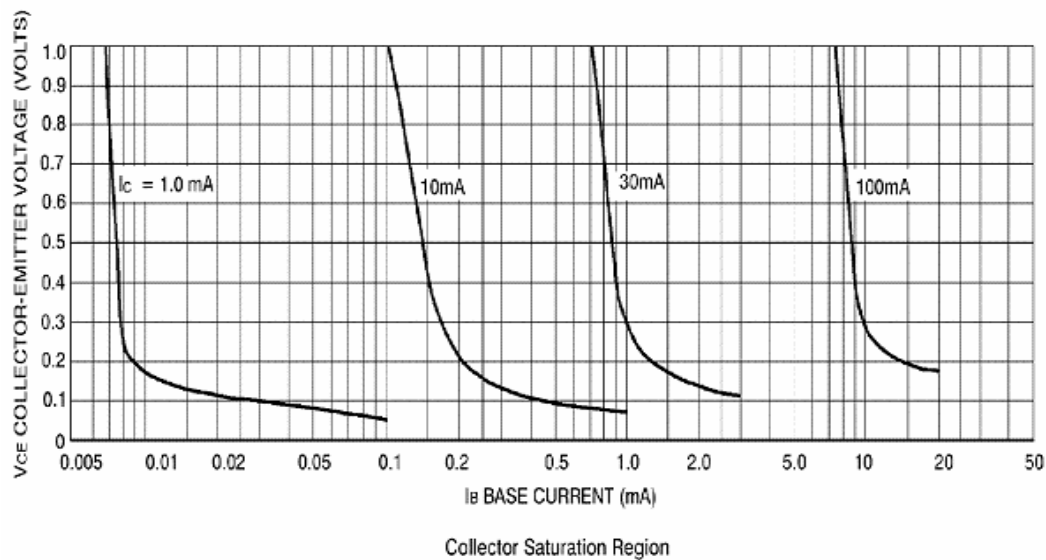
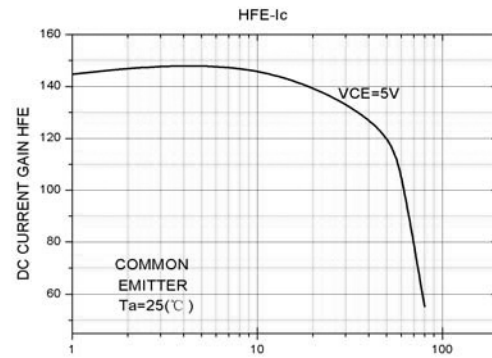
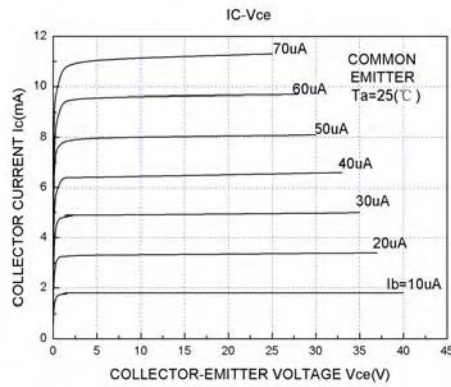
Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	180	V
V <sub>CEO</sub>	Collector-Emitter Voltage	160	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current -Continuous	0.6	A
P <sub>C</sub>	Collector Power Dissipation	0.5	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-65-150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μ A, I <sub>E</sub> =0	180			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	160			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10 μ A, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =120V, I <sub>E</sub> =0			50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			50	nA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	80			
	h <sub>FE(2)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	80		250	
	h <sub>FE(3)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	30			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			0.15	V
	V <sub>CE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			0.2	V
Base-emitter voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			1	V
	V <sub>BE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHZ	100			MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			6	pF
Noise figure	NF	V <sub>CE</sub> =5V, I <sub>C</sub> =0.2mA, f=10Hzto15.7KHZ, R <sub>s</sub> =10Ω			8	dB



## Typical Characteristosc



Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT -89	1000pcs	7inch	10,000pcs	203×203×195	40,000pcs	438×438×220