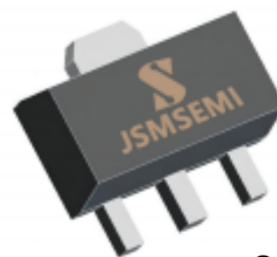


FEATURES

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


SOT-89

1. BASE
2. COLLECTOR
3. EMITTER

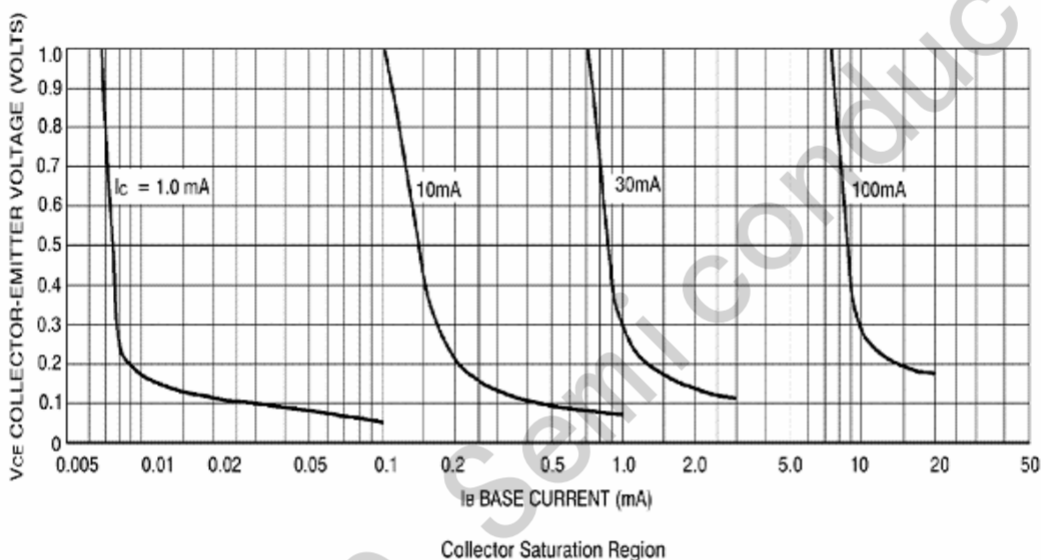
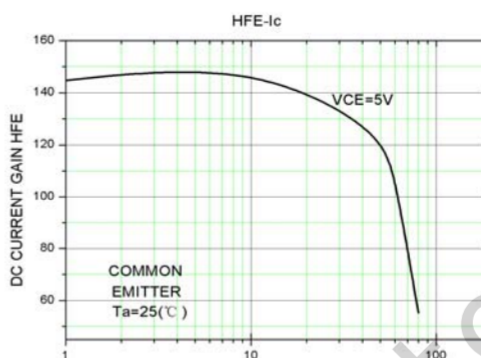
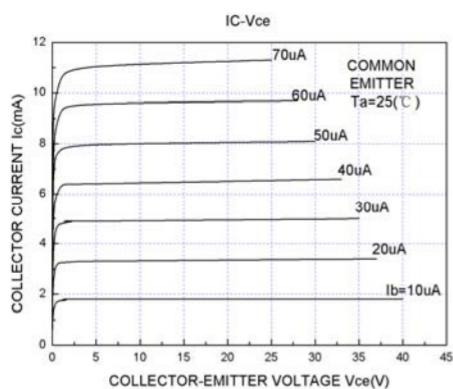
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.6	A
P_C	Collector Power Dissipation	0.5	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65-150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

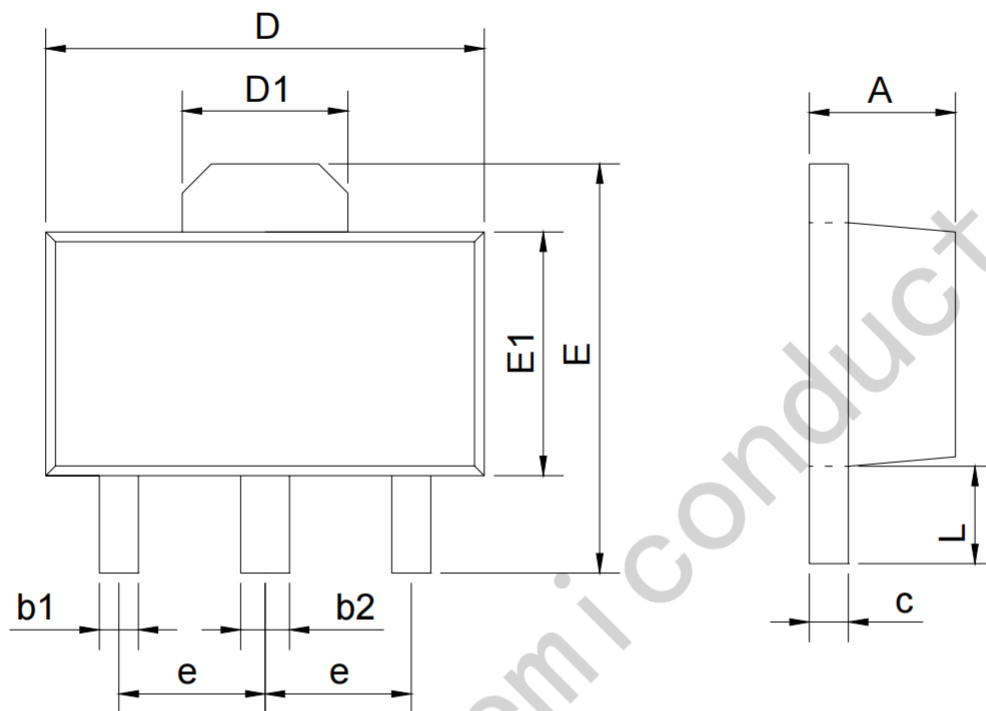
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=120\text{V}, I_E=0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1\text{mA}$	80			
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	80		300	
	$h_{FE(3)}$	$V_{CE}=5\text{V}, I_C=50\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.15	V
	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			0.2	V
Base-emitter voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1	V
	$V_{BE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			1	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			6	pF
Noise figure	NF	$V_{CE}=5\text{V}, I_C=0.2\text{mA}, f=10\text{Hz to } 15.7\text{KHz}, R_s=10\Omega$			8	dB

Typical Characteristosc



Package Information

SOT-89



SYMBOL	mm	
	min	max
A	1.40	1.60
b1	0.35	0.50
b2	0.45	0.60
c	0.36	0.46
D	4.30	4.70
D1	1.40	1.80
E	4.00	4.40
E1	2.30	2.70
e	1.50BSC	
L	0.80	1.20