

### NPN-General use transistor

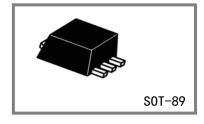
1W 1A 80V

**Applications:** Can be used for switching and amplifying in

various electrical and electronic equipments.

Circuit:





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#### Max ratings

Parameters	Symbol	Rating	Unit
Collector–emitter voltage (I <sub>B</sub> =0)	$V_{CEO}$	80	V
Collector–base voltage (I <sub>E</sub> =0)	$V_{CBO}$	100	V
Emitter – base voltage (I <sub>C</sub> =0)	$V_{\mathrm{EBO}}$	5	V
Collector current	$I_{C}$	1	A
Total power dissipation (T <sub>A</sub> =25°C)*	P <sub>tot</sub>	1	W
Max junction temperature	$T_{jm}$	150	$^{\circ}$
Storage temperature	$T_{stg}$	-55~150	$^{\circ}$
* mounted on printed circuit board.		,	

### 

Parameters	symbol	Test condition	min	typ	max	unit
Collector–emitter breakdown voltage	V <sub>(BR)CEO</sub>	$I_C=1$ mA, $I_B=0$	80			V
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	$I_{C}$ =100 $\mu$ A, $I_{E}$ =0	100			V
Emitter– base breakdown voltage	V <sub>(BR)EBO</sub>	$I_{E}=100\mu A$ , $I_{C}=0$	5			V
Forward current transfer ratio <sup>1)</sup>	$h_{ m FE}$	V <sub>CE</sub> =2V; I <sub>C</sub> =150mA	120	_	240	
Collector-base cutoff current	$I_{CBO}$	$V_{CB} = 30V, I_{E} = 0$		_	100	nA
Collector–emitter saturation voltage <sup>1)</sup>	V <sub>CE</sub> (sat)	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		_	0.5	V
Transition frequency	$f_{\mathrm{T}}$	$I_{C}=10$ mA, $V_{CE}=5V$ , $f=100$ MHz		130	_	MHz
<sup>1)</sup> pulse method: $t_w$ :300 $\mu$ s, duty ratio $\leq$ 2%.						

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# Typical curve

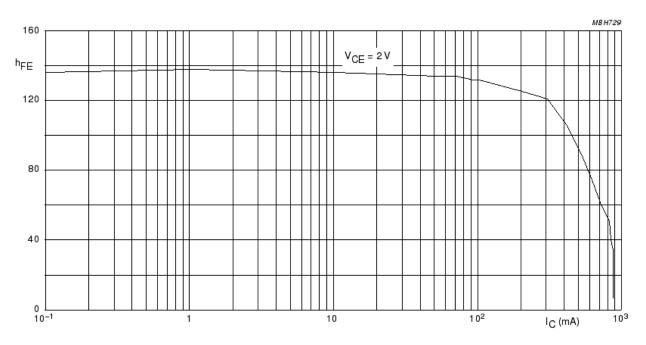
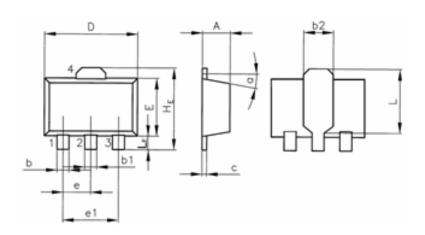


Fig.1 DC current gain; typical values.

### Outline dimensions



尺寸	SOT-89				
符号	min	type	max		
A	1.4		1.6		
b	0.35		0.55		
b1	0.4		0.65		
b2		1.6			
c	0.35		0.45		
D	4.4		4.6		
Е	2.35		2.55		
e		1.5			
e1		3			
HE		4.15			
L		2.7			
LE		1.0			
а		50			

unit: mm

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