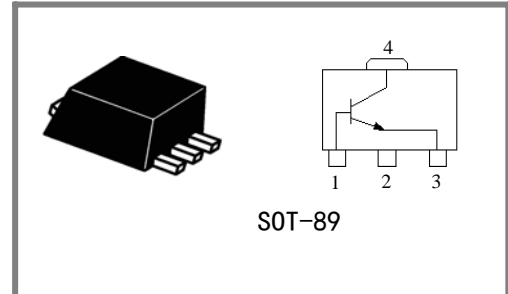


NPN-General use transistor

1W 1A 60V

Applications: Can be used for switching and amplifying in various electrical and electronic equipments.



Max ratings

Parameters	Symbol	Rating	Unit
Collector-emitter voltage ($I_B=0$)	V_{CEO}	60	V
Collector-base voltage ($I_E=0$)	V_{CBO}	80	V
Emitter-base voltage ($I_C=0$)	V_{EBO}	5	V
Collector current	I_C	1	A
Total power dissipation ($T_A=25^\circ\text{C}$)*	P_{tot}	1	W
Max junction temperature	T_{jm}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~150	$^\circ\text{C}$

* mounted on printed circuit board.

Characteristics (Unless otherwise specified, $T_A=25^\circ\text{C}$)

Parameters	symbol	Test condition	min	typ	max	unit
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	60	—	—	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	80	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	5	—	—	V
Forward current transfer ratio ¹⁾	h_{FE}	$V_{CE}=2\text{V}$; $I_C=150\text{mA}$	100	—	300	—
Collector-base cutoff current	I_{CBO}	$V_{CB}=30\text{V}$, $I_E=0$	—	—	100	nA
Collector-emitter saturation voltage ¹⁾	$V_{CE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$	—	—	0.5	V
Transition frequency	f_T	$I_C=10\text{mA}$, $V_{CE}=5\text{V}$, $f=100\text{MHz}$	—	130	—	MHz

¹⁾ pulse method: $t_w:300\mu\text{s}$, duty ratio $\leq 2\%$.

Typical curve

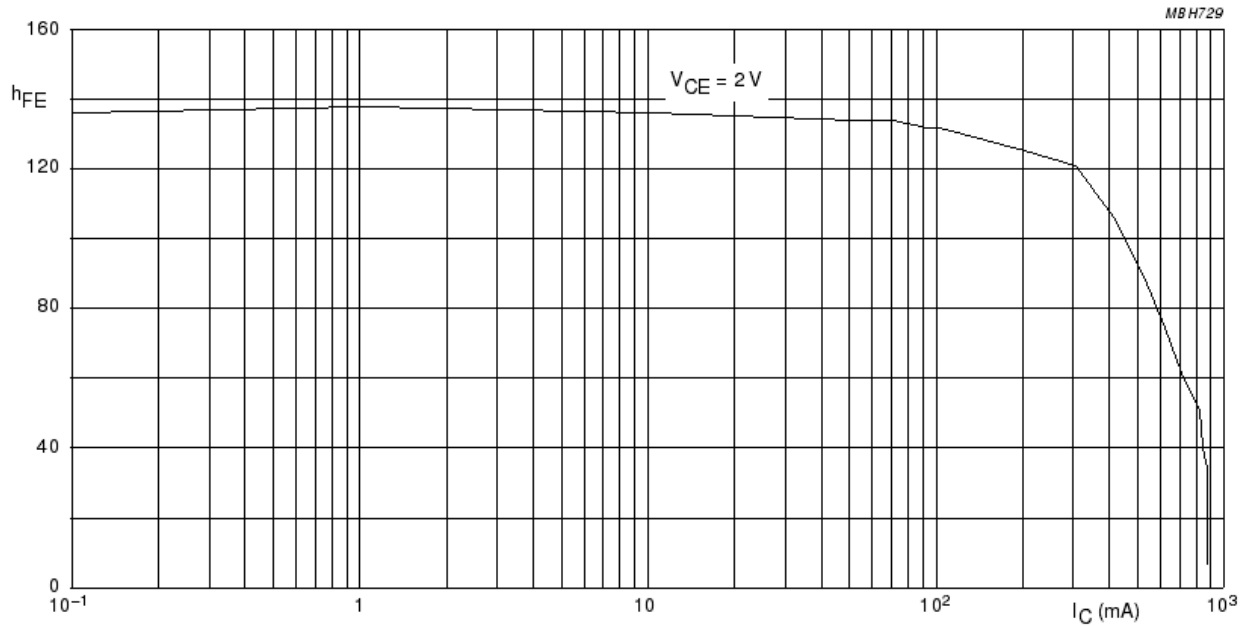
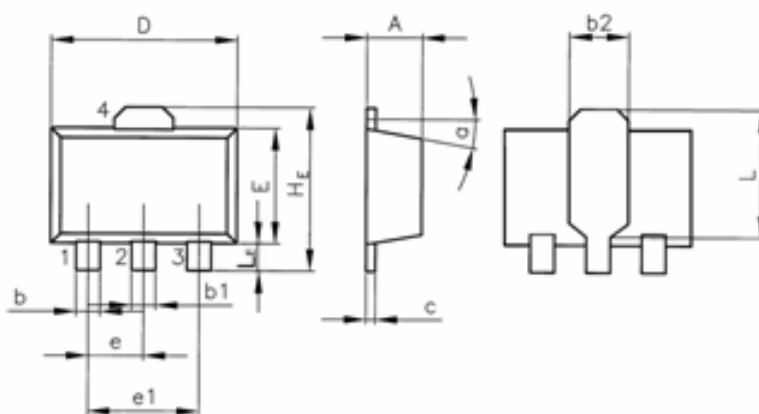


Fig.1 DC current gain; typical values.

Outline dimensions

unit: mm



尺寸 符号	SOT-89		
	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
E	2.35		2.55
e		1.5	
e1		3	
HE		4.15	
L		2.7	
LE		1.0	
a		5 ϕ	