

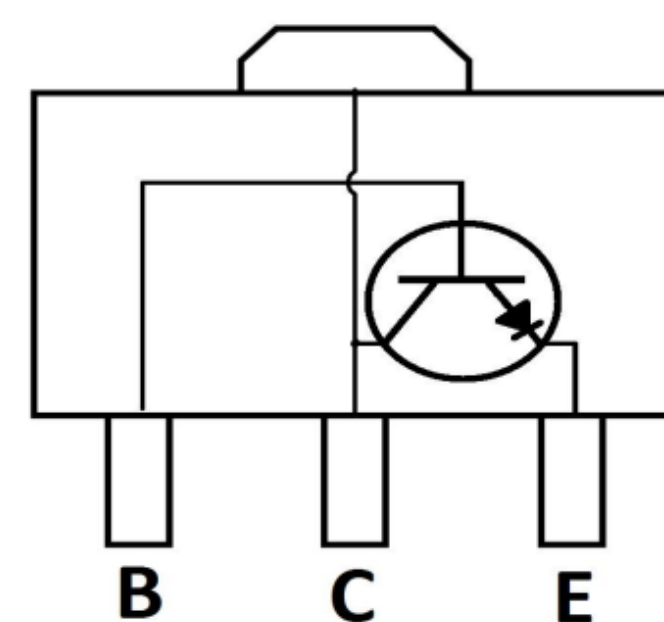
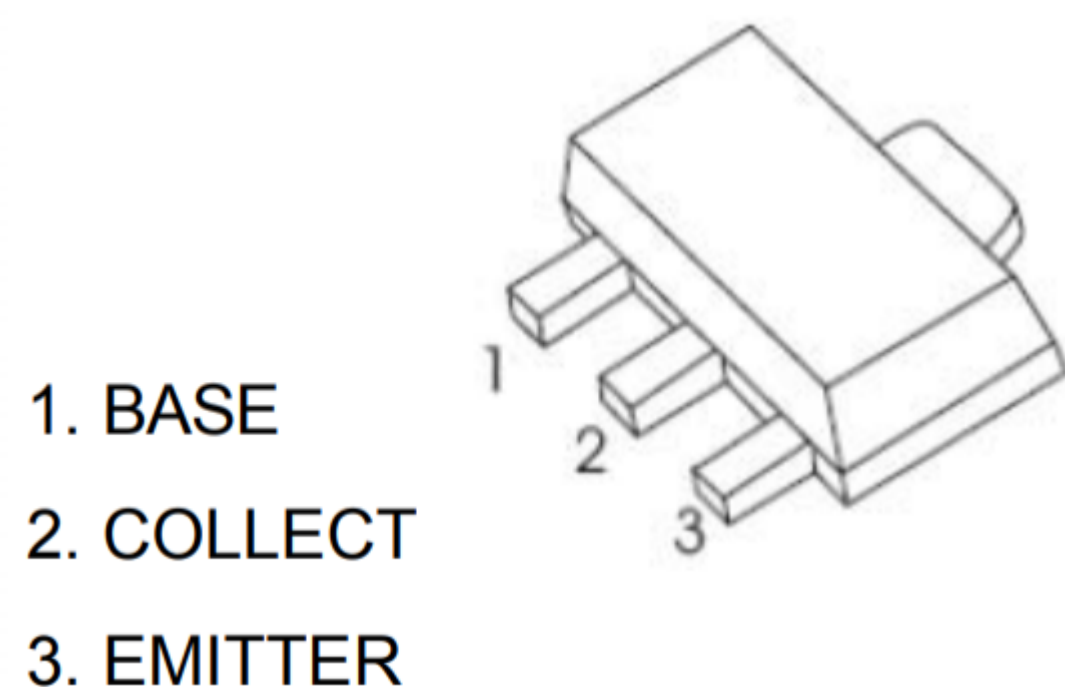
Features

- High current
- Low voltage

Ordering Information

- Shipping Qty:1000 /7inch Tape& Reel

Circuit Diagram



SOT-89

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	100	mA
I_{CM}	Peak Collector Current	200	mA
I_{BM}	Peak Base Current	100	mA
P_{tot}	Total Power Dissipation	0.45	W
T_j	Junction Temperature	150	°C
T_{slg}	Storage Temperature	-65 to +150	°C

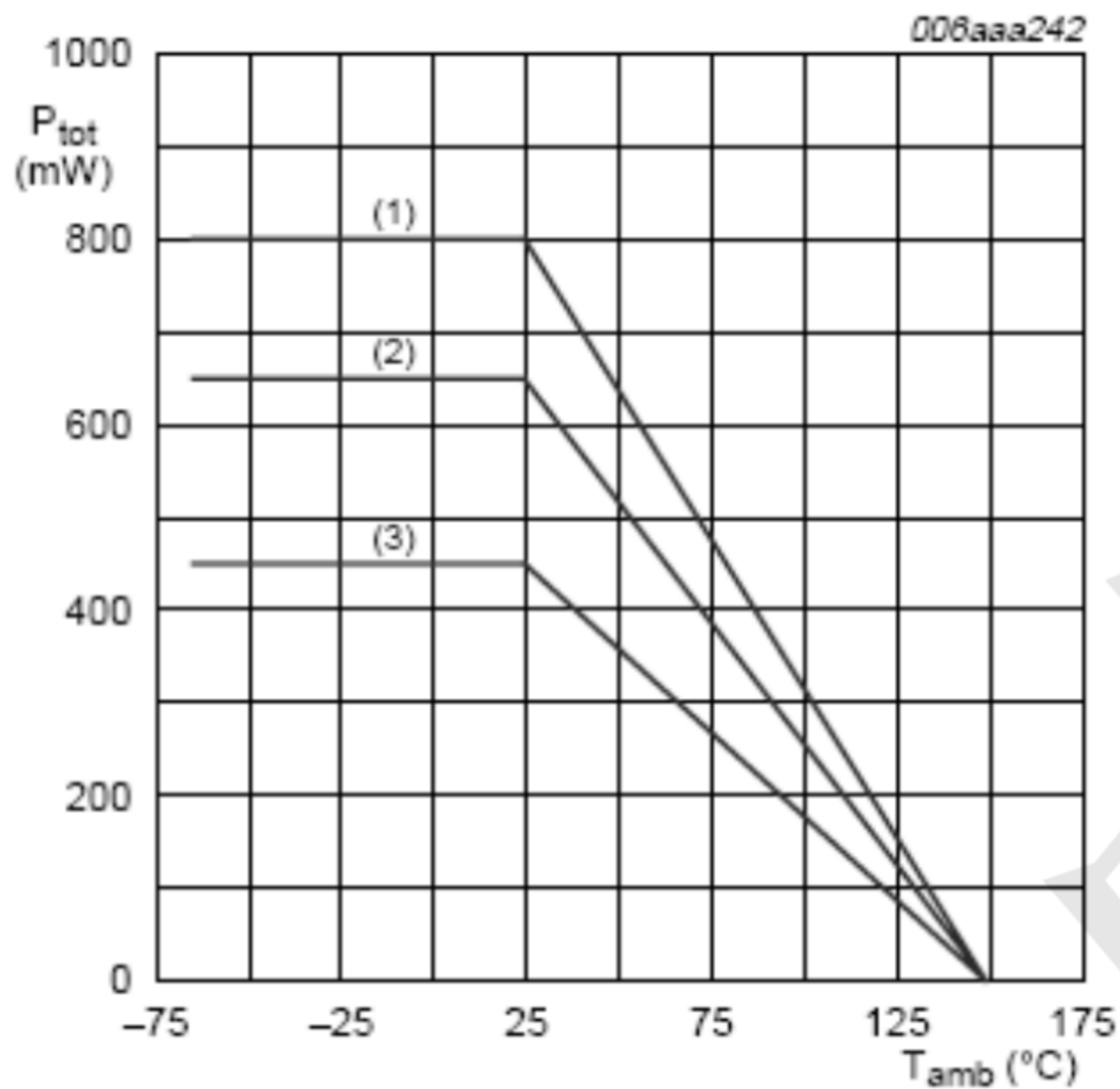
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$		50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=6V, I_C=0$		50	nA
DC current gain	h_{FE}	$V_{CE}=1V, I_C=0.1mA$ $V_{CE}=1V, I_C=1mA$ $V_{CE}=1V, I_C=10mA$ $V_{CE}=1V, I_C=50mA$ $V_{CE}=1V, I_C=100mA$	60 80 100 60 30	300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$ $I_C=50mA, I_B=5mA$		0.2 0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$ $I_C=50mA, I_B=5mA$	0.65	0.85 0.95	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA,$ $f=100MHz$	300		MHz
Collector Capacitance	C_c	$V_{CB}=5V, f=1MHz, I_E=0$		4	pF
Emitter Capacitance	C_e	$V_{EB}=0.5V, f=1MHz, I_C=0$		8	pF
Noise Figure	F	$I_C=100\mu A, V_{CE}=5V, R_S=1k\Omega$ $F=10Hz$ to $7.5kHz$		5	dB



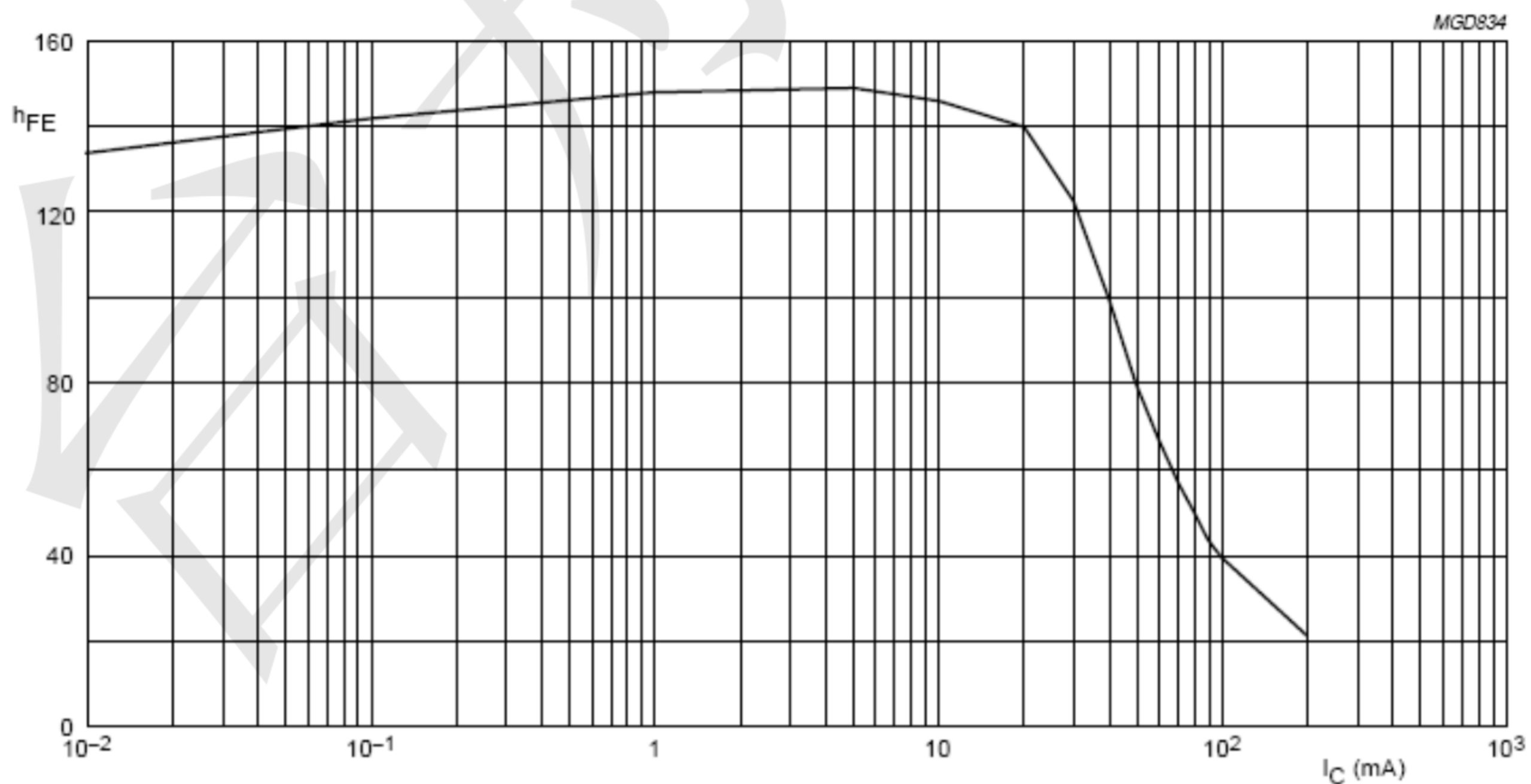
TYPICAL CHARACTERISTICS @ $T_a=25^{\circ}\text{C}$ unless otherwise specified

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- (1) FR4 PCB; 6 cm^2 mounting pad for collector.
- (2) FR4 PCB; 1 cm^2 mounting pad for collector.
- (3) FR4 PCB; standard footprint.

Power derating curves.

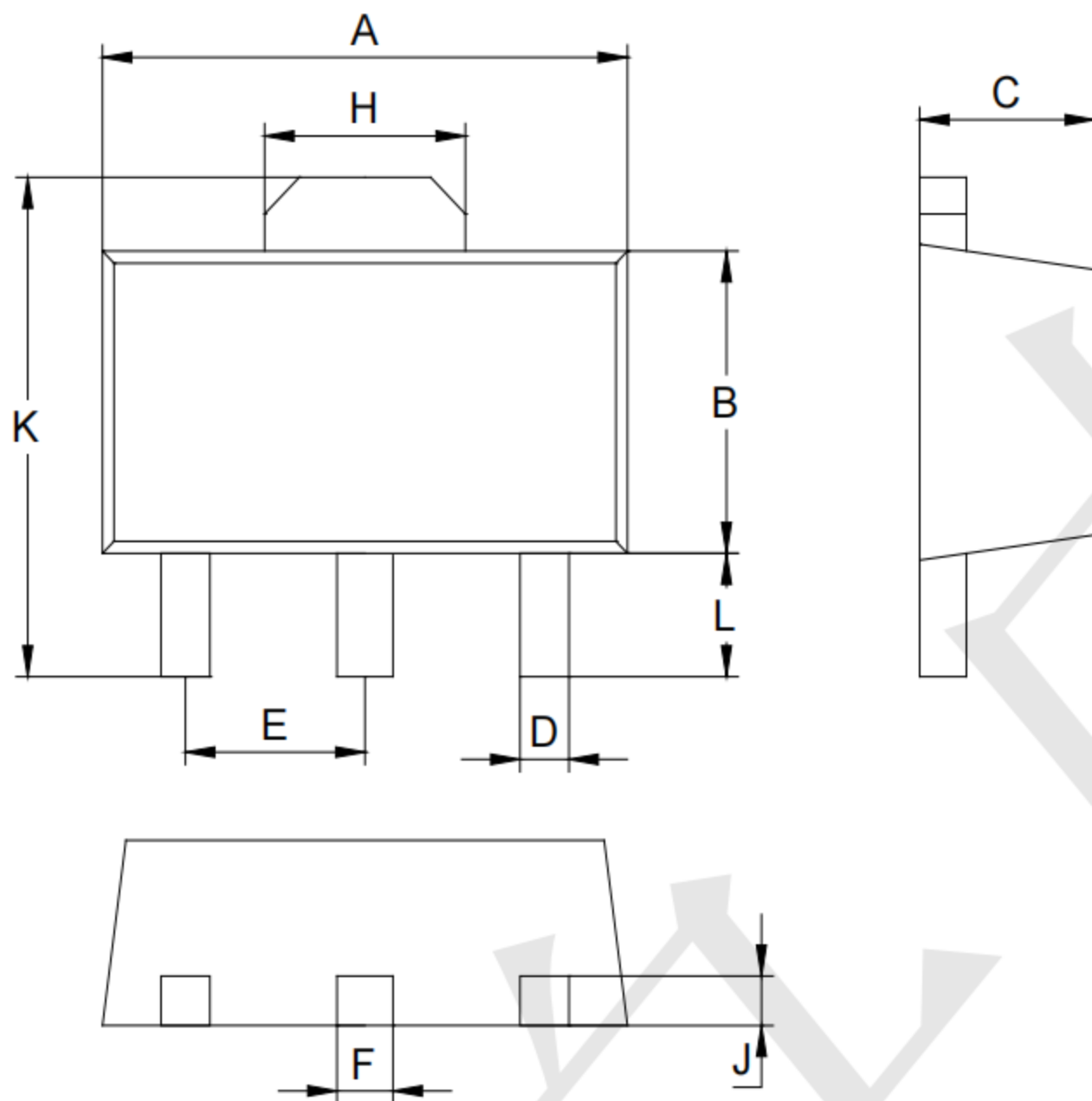


$V_{\text{CE}} = 1 \text{ V.}$

DC current gain; typical values.

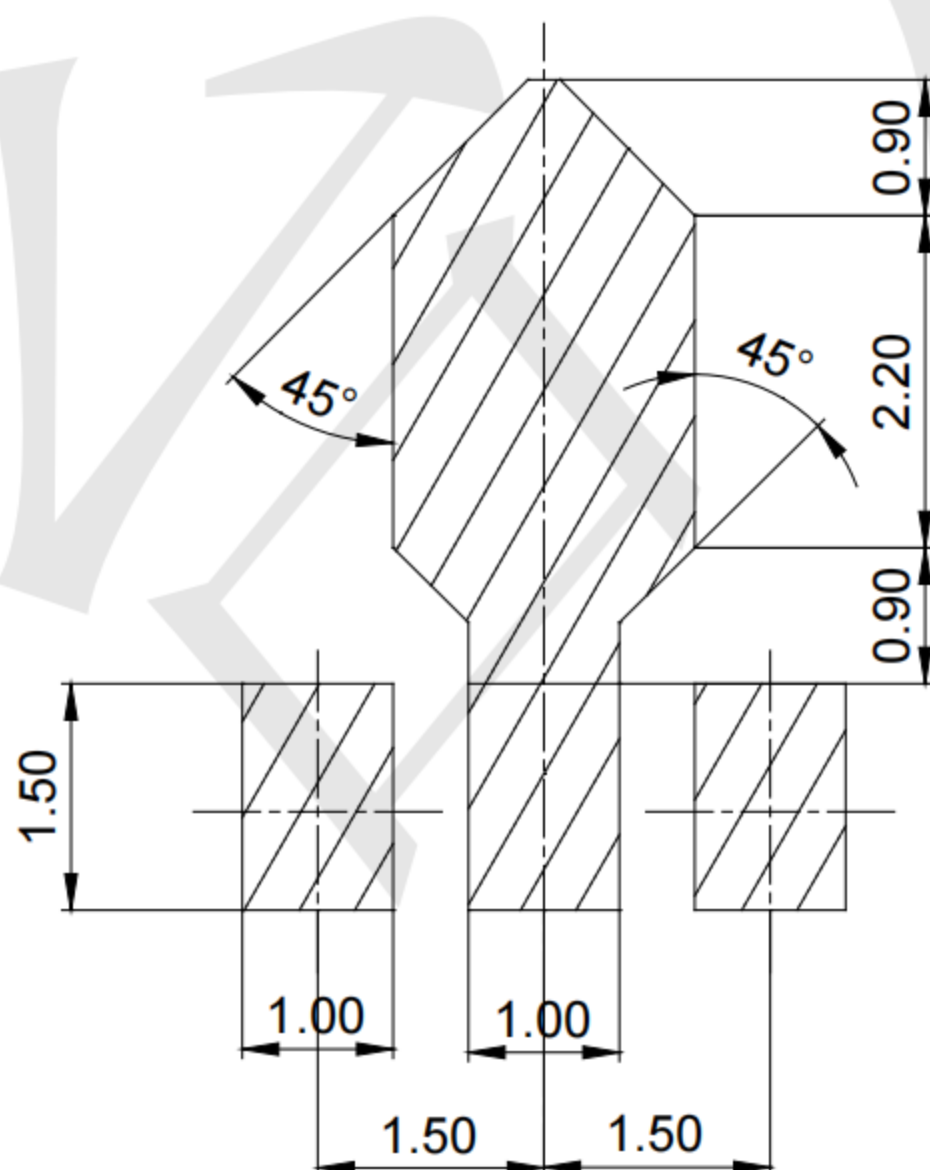
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Outline Drawing - SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.30	1.70
D	0.30	0.50
E	1.40	1.60
F	0.38	0.58
H	1.60	1.80
J	0.30	0.50
L	0.90	1.10
K	3.95	4.35
All Dimensions in mm		

Land Pattern - SOT-89



Unit: mm