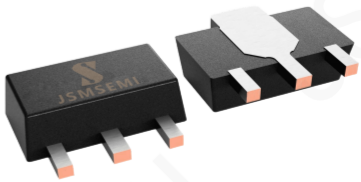
Features

Low noise and high gain.

NF = 1.1 dB Typ., G_a = 11 dB Typ. @V_{CE} = 10V,Ic=7 mA, f = 1.0 GHz

High power gain.

MAG = 13 dB Typ. @V_{CE} = 10 V, I_C = 20 mA, f = 1.0 GHz



SOT-89

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	10	V
Emitter to base voltage	V_{EBO}	3.0	V
Collector current (DC)	I_C	100	mA
Total power dissipation	P_{tot}	200	mW
Junction temperature	T_j	150	℃
Storage temperature range	T_{stg}	-65 to +150	℃

Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	20			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	12			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 uA, I_C= 0	3			
Collector-base cut-off current	I_{CBO}	V_{CB}= 10 V , I_E= 0			1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 3V , I_C=0			1	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C=50 mA, I_B=5mA			0.4	V
Base - emitter saturation voltage *	$V_{BE(sat)}$	I_C=50 mA, I_B=5mA			1.2	
DC current gain *	h_{FE}	V_{CE}= 10V, I_C= 20mA	50		400	
Insertion power gain	$\|S21e\|^2$	V_{CE} = 10 V, I_C = 20 mA, f= 1GHz		11.5		dB
Noise figure	NF	V_{CE} = 10 V, I_C = 7 mA, f= 1GHz		1.1	2	
Reverse transfer capacitance	C_{re}	V_{CB}= 10V, I_E= 0,f=1MHz		0.55	1	pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 20mA		7		GHz

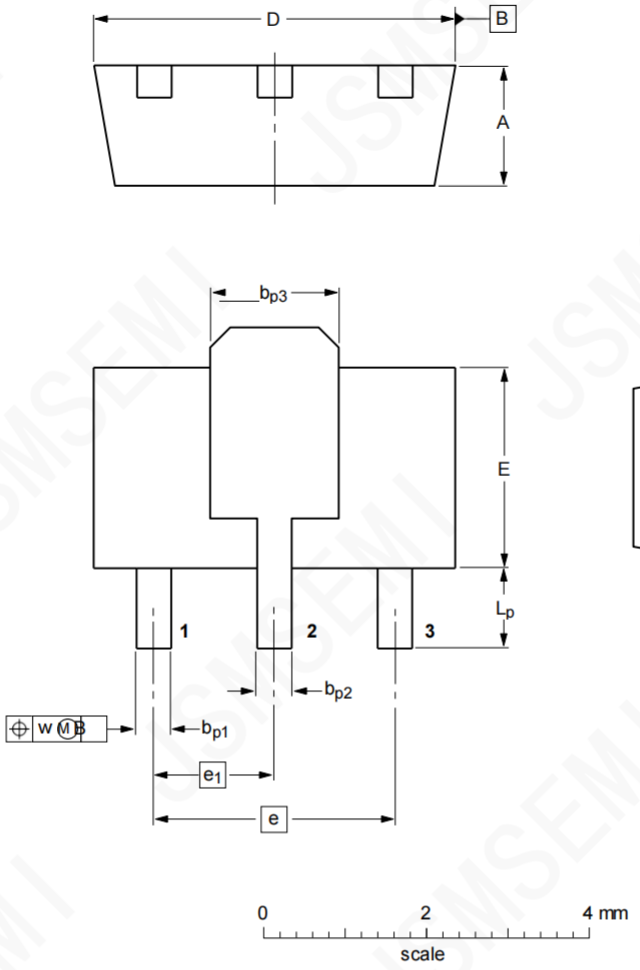
*. Pulse measurement: PW≤ 350 μ s, Duty Cycle≤2%.

h_{FE} Classification

HFE: 120~200

Package Outline

SOT-89



DIMENSIONS (mm are the original dimensions)

UNIT	A	b_{p1}	b_{p2}	b_{p3}	c	D	E	e	e_1	H_E	L_p	w
mm	1.6 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13