

/ Descriptions

SOT-89 PNP Silicon PNP transistor in a SOT-89 Plastic Package.

/ Features

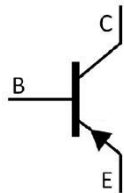
2SD2185

Low $V_{CE(sat)}$, complementary to 2SD2185.

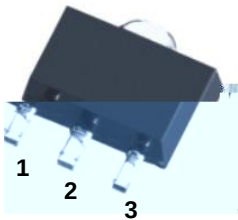
/ Applications

For low frequency output amplification.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Marking

h_{FE} Classifications Symbol	R	S
h_{FE} Range	120 240	170 340
Marking	H1IR	H1IS

/ Absolute Maximum Ratings(Ta=25 –)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-50	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current-Continuous	I_C	-2.0	A
Collector Current -Continuous(Pulse)	I_{CP}	-3.0	A
Collector Power Dissipation*	P_C	1.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

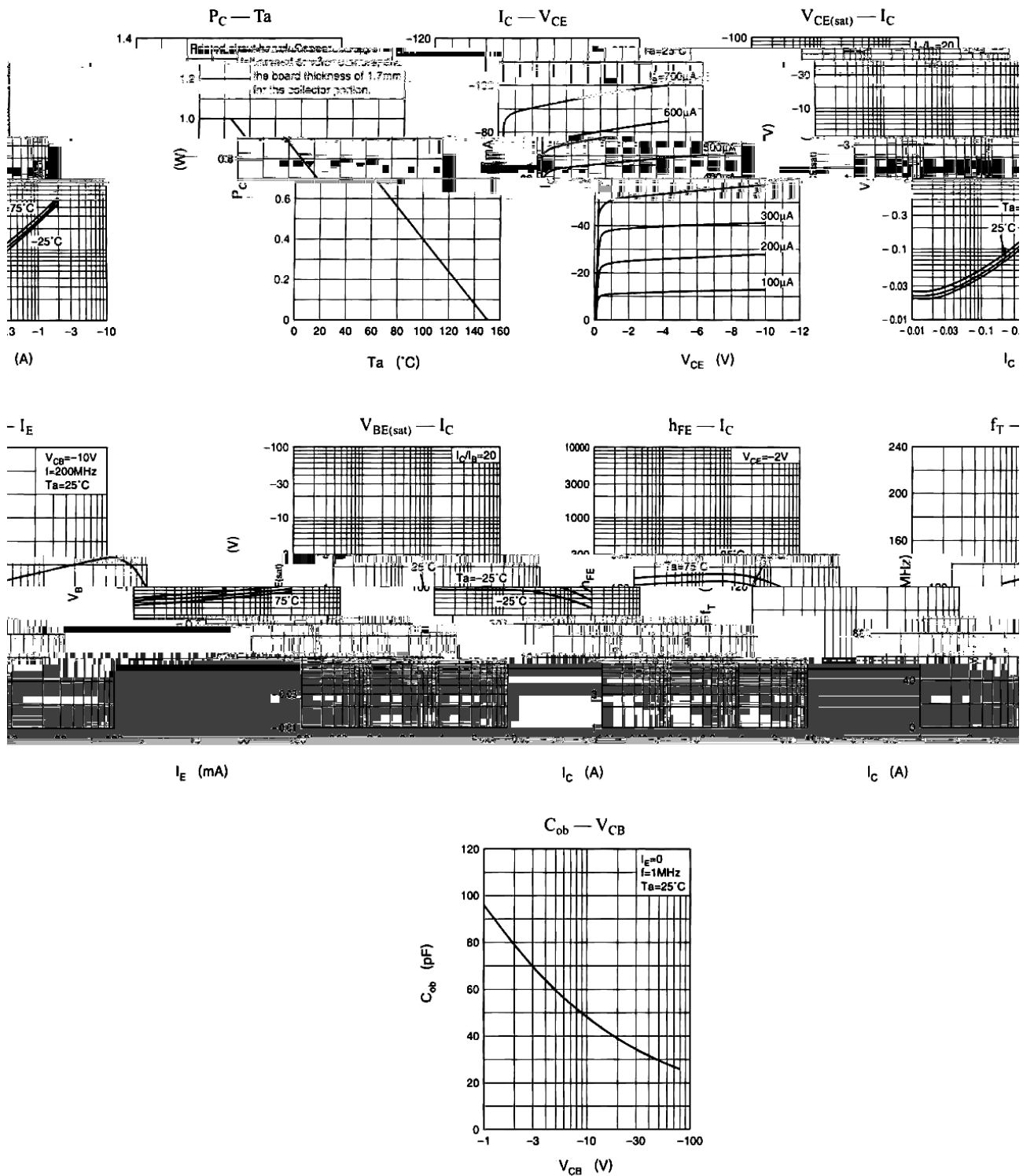
*printed circuit board: copper foil area of 1cm^2 or more, and the board thickness of 1.7mm for C portion.

* C 1cm^2 1.7mm

/ Electrical Characteristics(Ta=25 –)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-10\mu\text{A}$ $I_E=0$	-50			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0\text{mA}$ $I_B=0$	-50			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-10\mu\text{A}$ $I_C=0$	-5.0			V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-2.0\text{V}$ $I_C=-200\text{mA}$	120		340	
	$h_{FE(2)}$	$V_{CE}=-2.0\text{V}$ $I_C=-1.0\text{A}$	60			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-1.0\text{A}$ $I_B=-50\text{mA}$		-0.2	-0.3	V
Collector to Base Saturation Voltage	$V_{BE(sat)}$	$I_C=-1.0\text{A}$ $I_B=-50\text{mA}$		-0.85	-1.2	V
Transition Frequency	f_T	$V_{CB}=-10\text{V}$ $I_C=-50\text{mA}$ $f=200\text{MHz}$		80		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$		45	60	pF

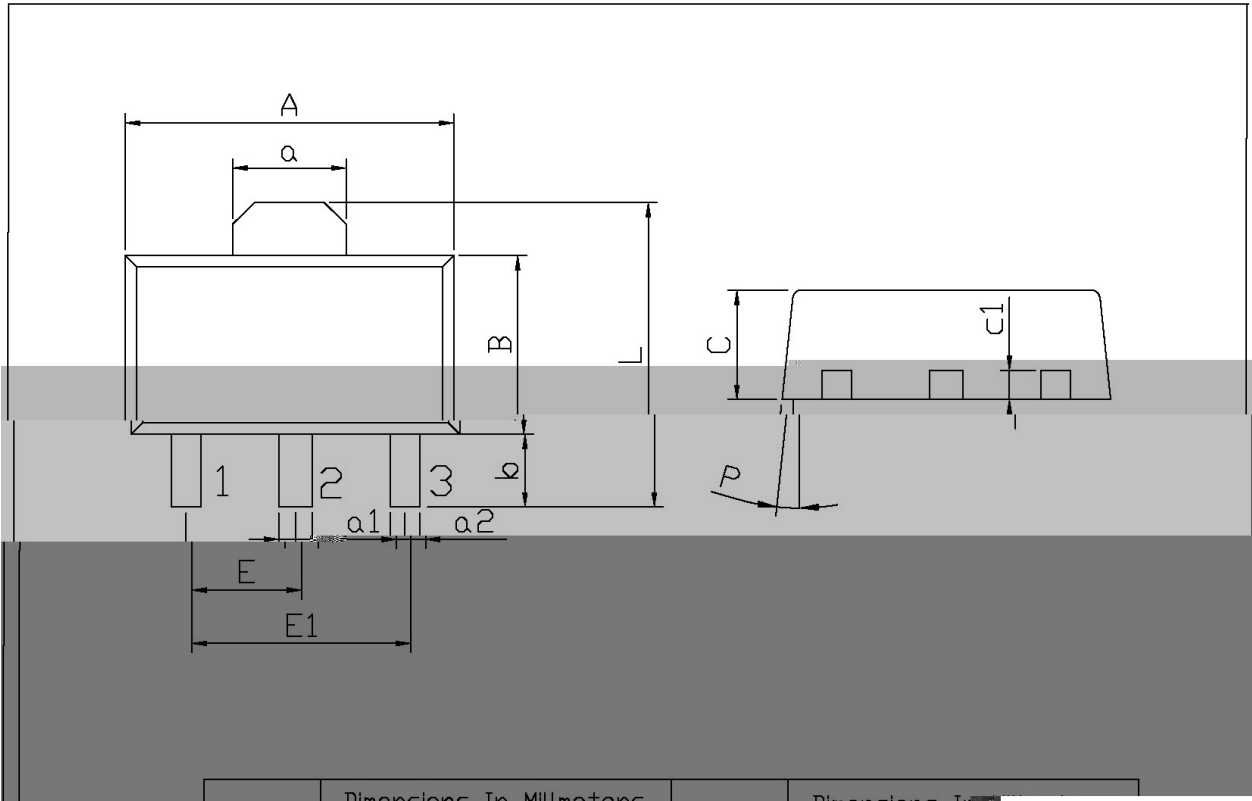
/ Electrical Characteristic Curve



/ Package Dimensions

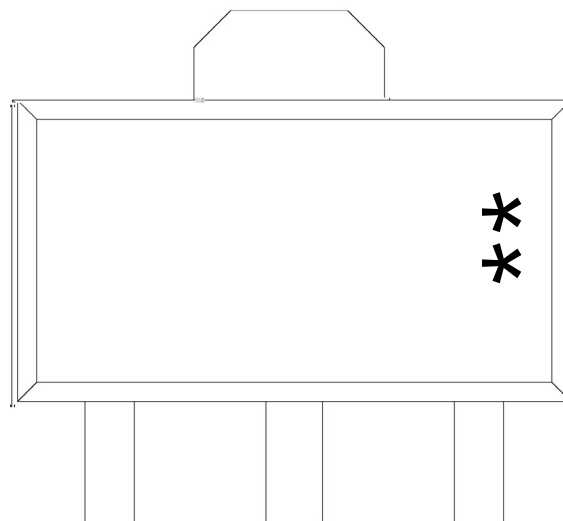
SOT-89

单位: mm



	α	1.45	1.65	$c1$	0.35	0.50
	E	1.40	1.60	P	6°	
	E1	2.80	3.20			
	b	0.80	1.20			

/ Marking Instructions



H

1I

R: h_{FE}

**

Note:

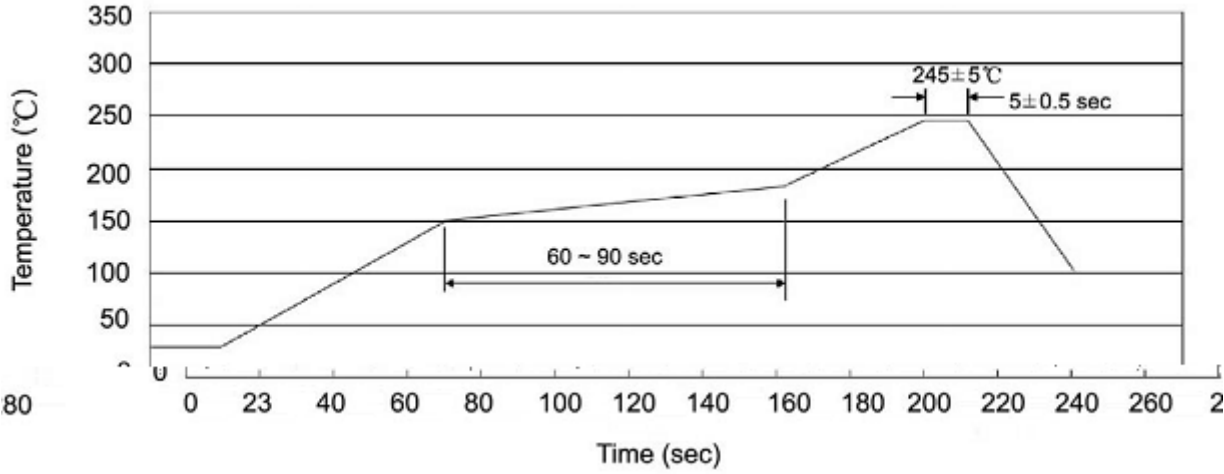
H: Company Code.

1I: Product Type.

R: h_{FE} Classifications Symbol

**: Lot No. Code, code change with Lot No.

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Note:

- | | | | | | |
|---|-------|-----|----|-----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 245±5 | | | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-89	1,000	7	7,000	8	56,000	7 ×12	180×120×180	385×257×392

/ Notices