

/ Descriptions

SOT-23 NPN Silicon NPN transistor in a SOT-23 Plastic Package.

/ Features

Low f_T .

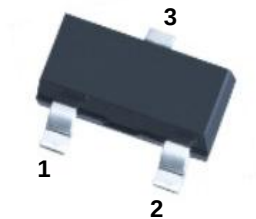
/ Applications

Low frequency general-purpose amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

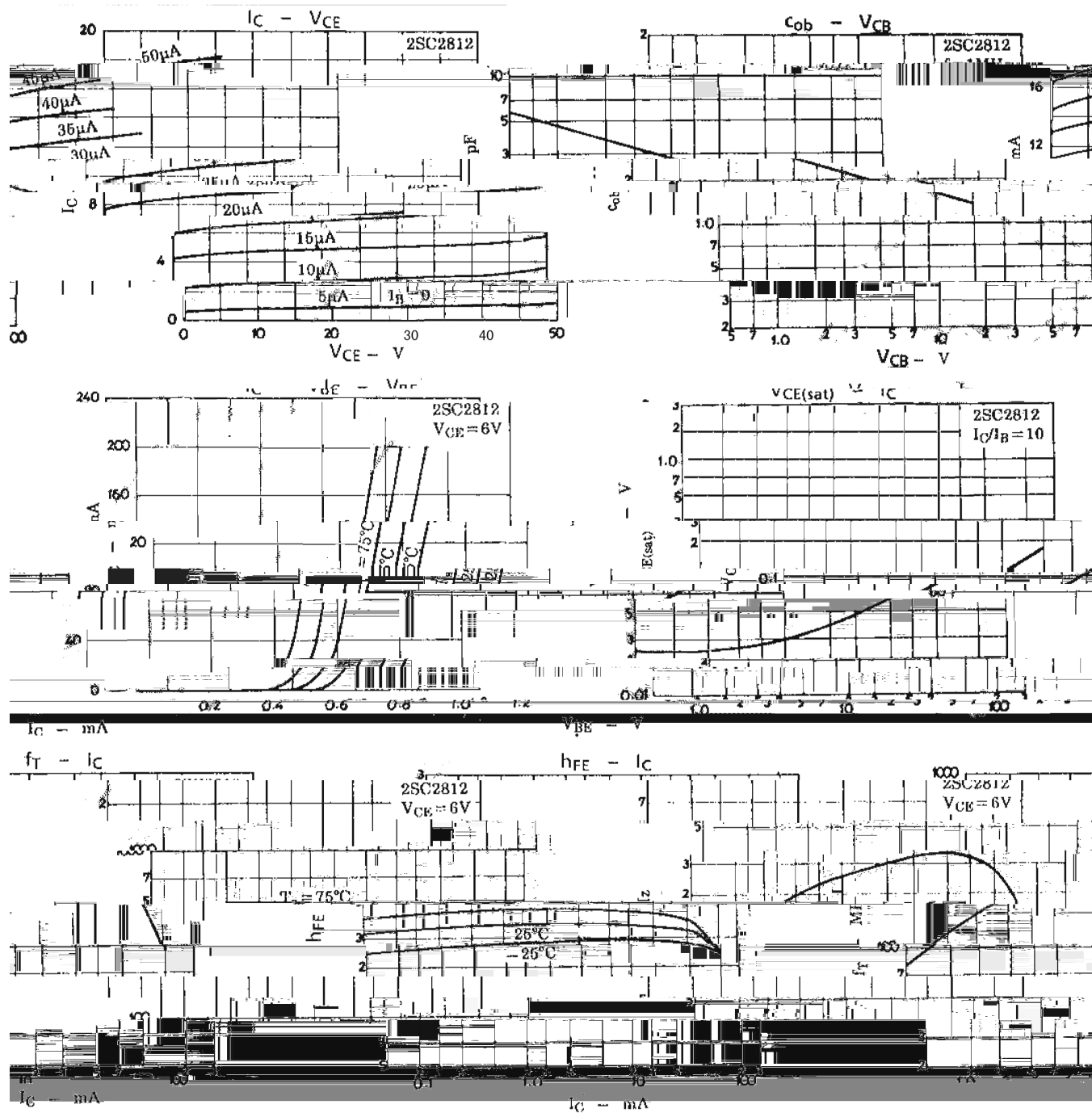
/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	4	5	6	7
h_{FE} Range	90 180	135 270	200 400	300 600
Marking	L4H	L5H	L6H	L7H

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	55	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	150	mA
Collector Current (Pulse)	I_{CP}	300	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=35V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=4.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6.0V$ $I_C=1.0mA$	90		600	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50mA$ $I_B=5.0mA$		0.1	0.5	V
Transition Frequency	f_T	$V_{CE}=6.0V$ $I_C=1.0mA$		100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=6.0V$ $f=1.0MHz$		3.0		pF
Collector to Base Time Constant	$r_{bb}'C$	$V_{CB}=6.0V$ $I_C=1.0mA$				

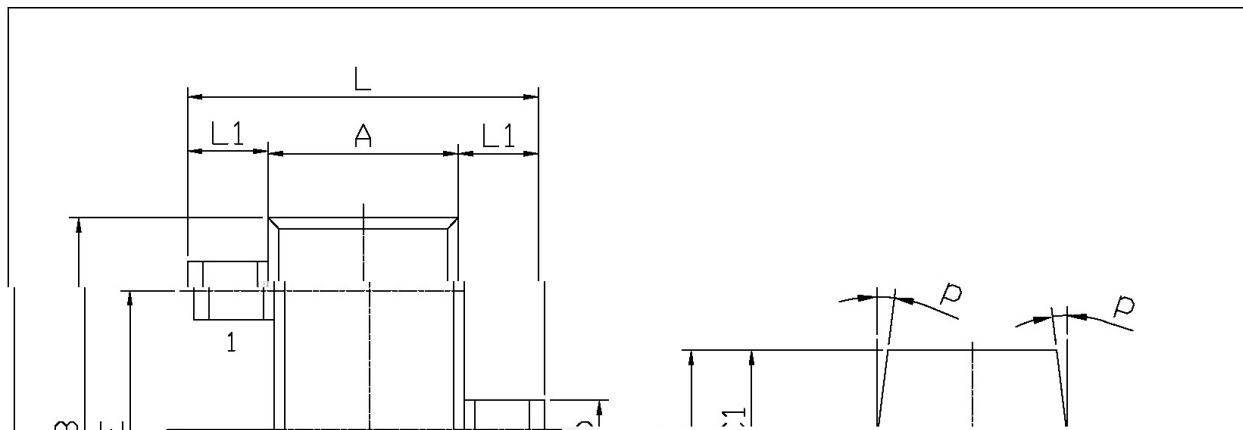
/ Electrical Characteristic Curve



/ Package Dimensions

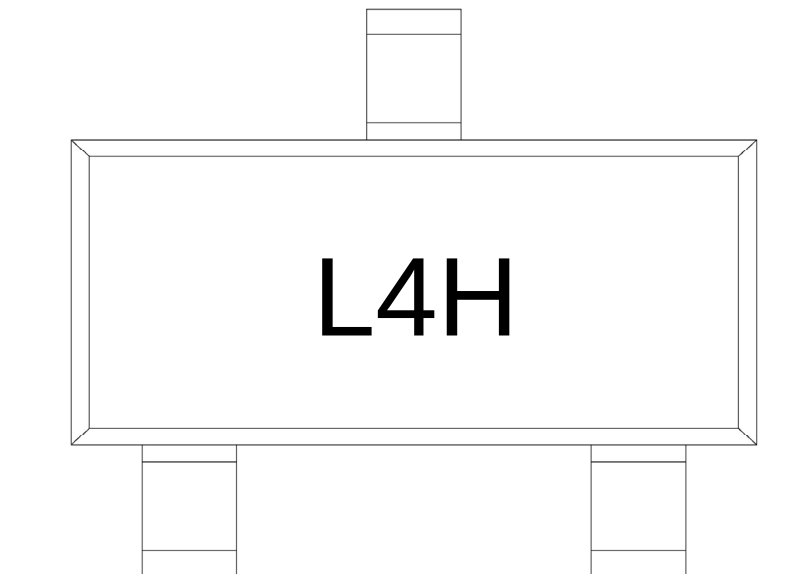
SOT-23

单位: mm



	MIN	MAX		MIN	MAX
L	2.2	2.7	C	1.30	Max
L1	0.45	0.65	C1	0.90	1.20
A ₁	1.15	1.50	C ₁	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20	MIN
E1	0.85	1.05	D ₁	7°	
b	0.35	0.55			

/ Marking Instructions



L

4 h_{FE}

H

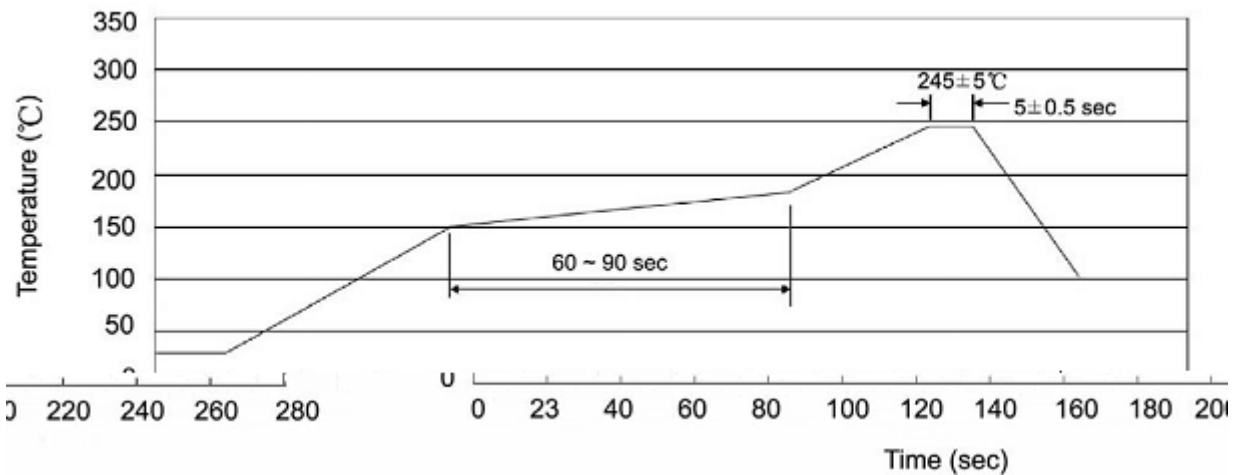
Note:

L Product Type Code

4 h_{FE} Classifications Symbol Code

H Company Code

() / **Temperature Profile for IR Reflow Soldering(Pb-Free)**



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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱