

/ Descriptions

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

/ Features

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process.

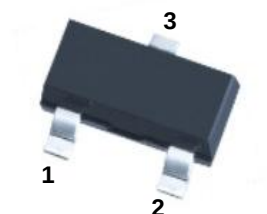
/ Applications

Switching, inverter circuit, interface circuit and driver circuit applications.

/ Equivalent Circuit



/ Pinning



PIN 1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

Marking	H25
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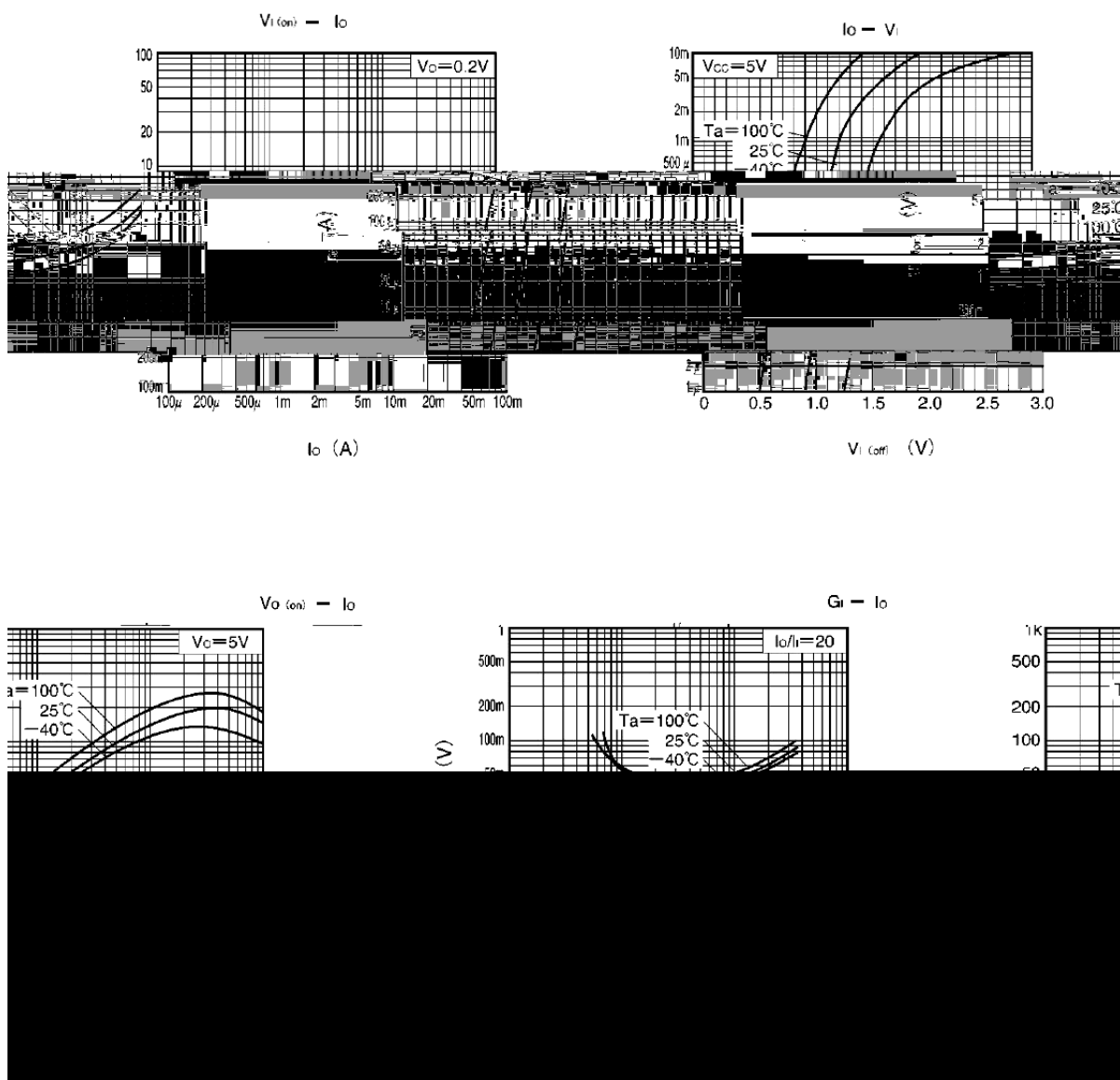
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Output Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	40	V
		-10	V
Output Current	I_C	100	mA
	I_O	30	mA
Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage(OFF)	$V_{I(off)}$	$v_{CC}=5.0V$ $I_O=100\mu A$			0.5	V
Input Voltage(ON)	$V_{I(on)}$	$V_O=0.2V$ $I_O=5.0mA$	3.0			V
Output Voltage	$V_{O(on)}$	$I_O=10mA$ $I_I=0.5mA$		0.1	0.3	V
Input Current	I_I	$V_I=5.0V$			0.36	mA
Output Cut-off Current	$I_{O(off)}$	$V_{CC}=50V$ $V_I=0V$			0.5	μA
DC Current Gain	G_I	$V_O=5.0V$ $I_O=5.0mA$	56			
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=5.0mA$ $f=100MHz$		250		MHz
Resistance1	R_1		15.4	22	28.6	K Ω
Resistance Ratio	R_2/R_1		0.8	1	1.2	

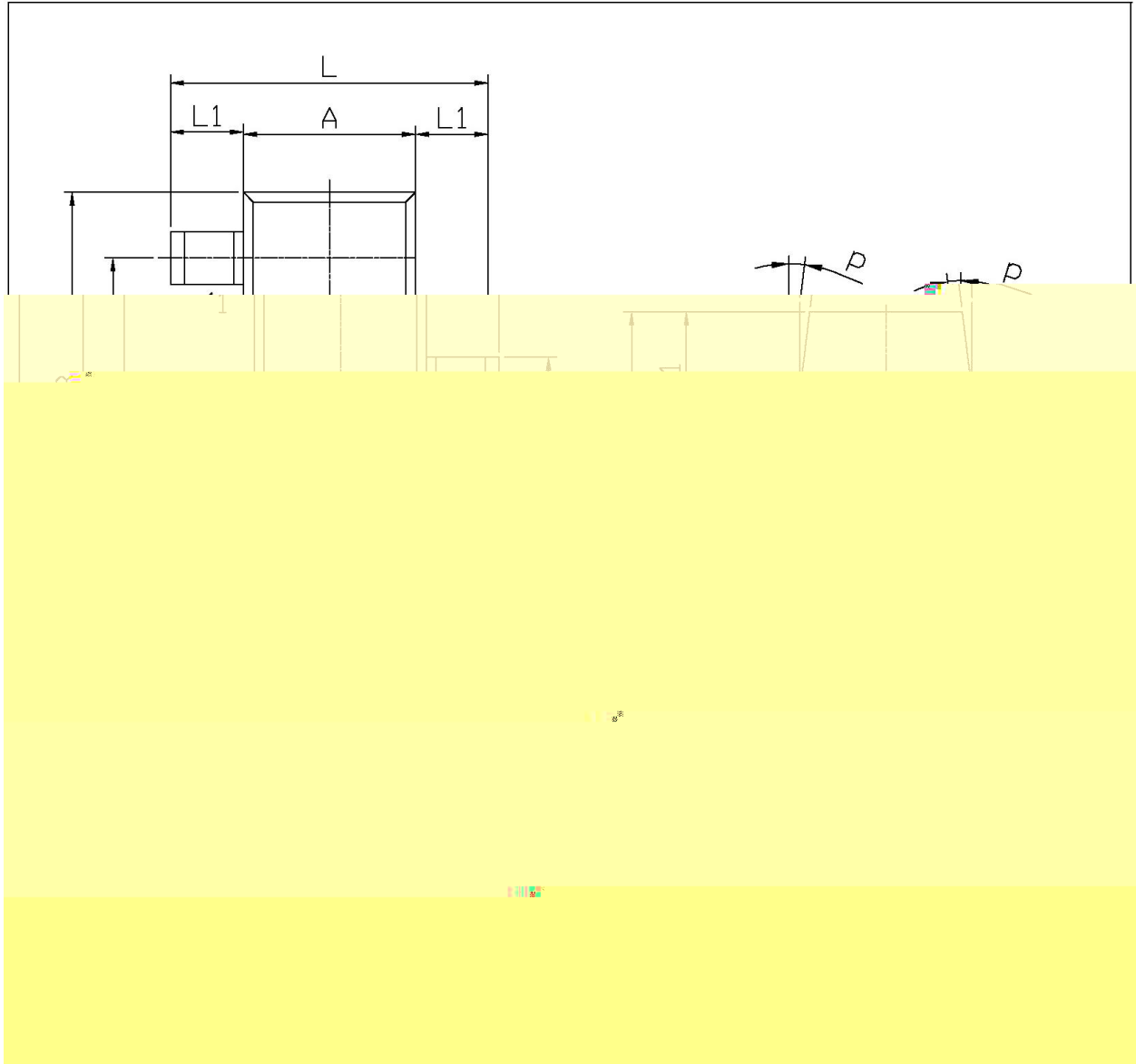
/ Electrical Characteristic Curve



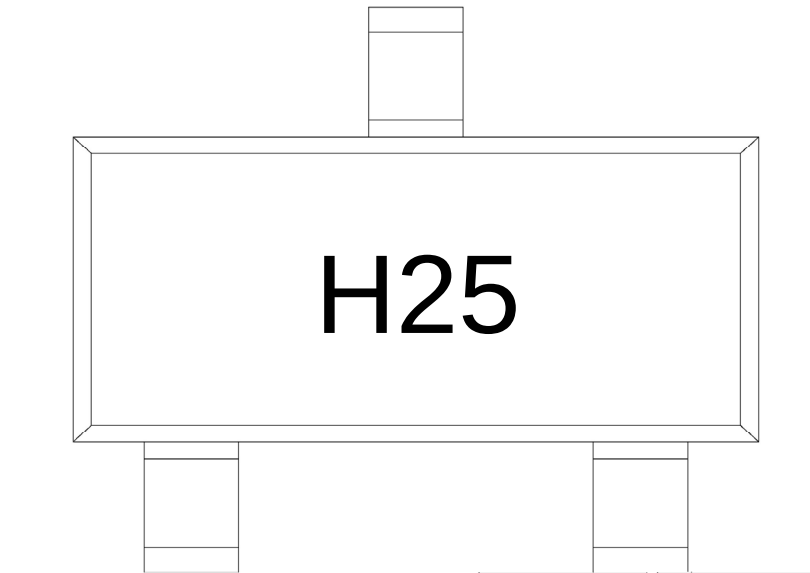
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



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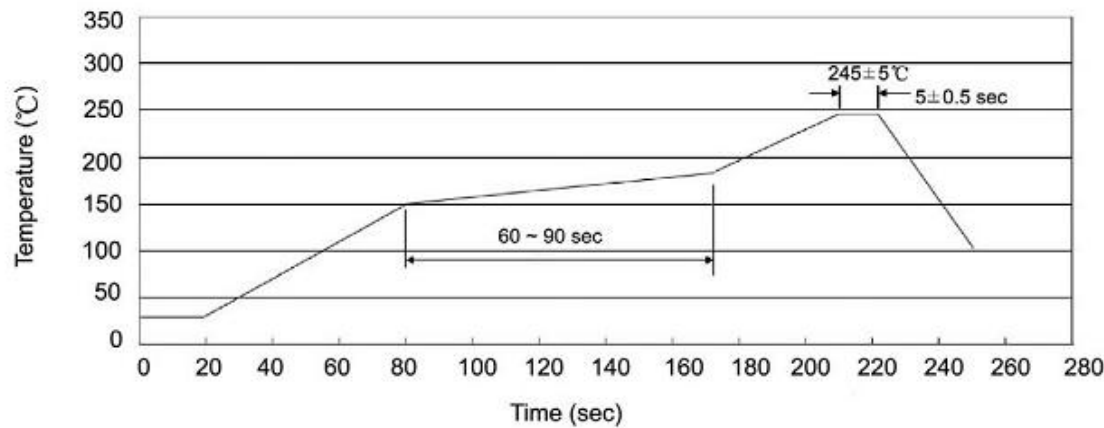
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Note:

H Company Code

25 Product Type Code

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



Note:

- 1

150 180

60 90sec;
- 2

245±5

5±0.5sec;
- 3

2 10

/sec.
- 1.Preheating:150~180

, Time:60~90sec.
- 2.Peak Temp.:245±5

, Duration:5±0.5sec.
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 式	Units 包装 量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel /卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box /盒	Inner Boxes/Outer Box 盒/	Units/Outer Box /	Reel	Inner Box 盒	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices