

/ 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.

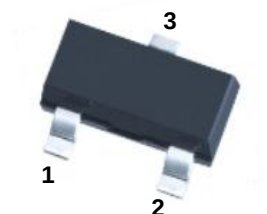
/ Applications

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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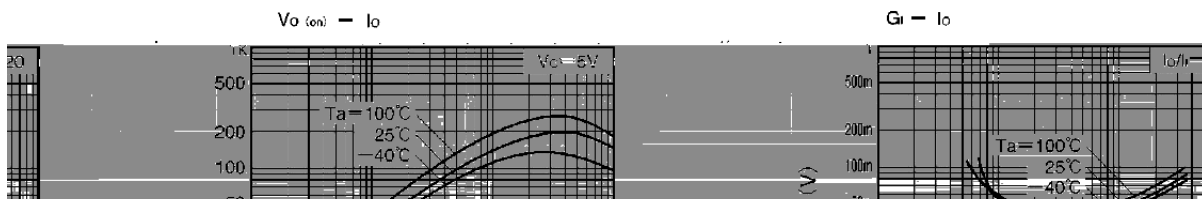
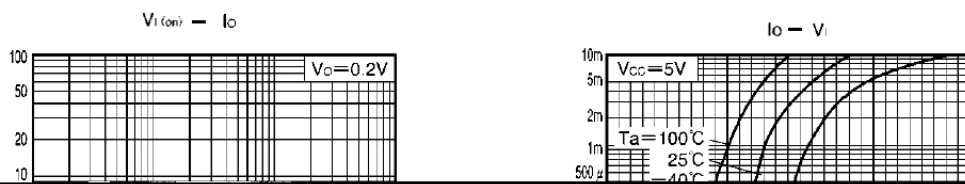
/ Absolute Maximum Ratings(Ta=25)

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	

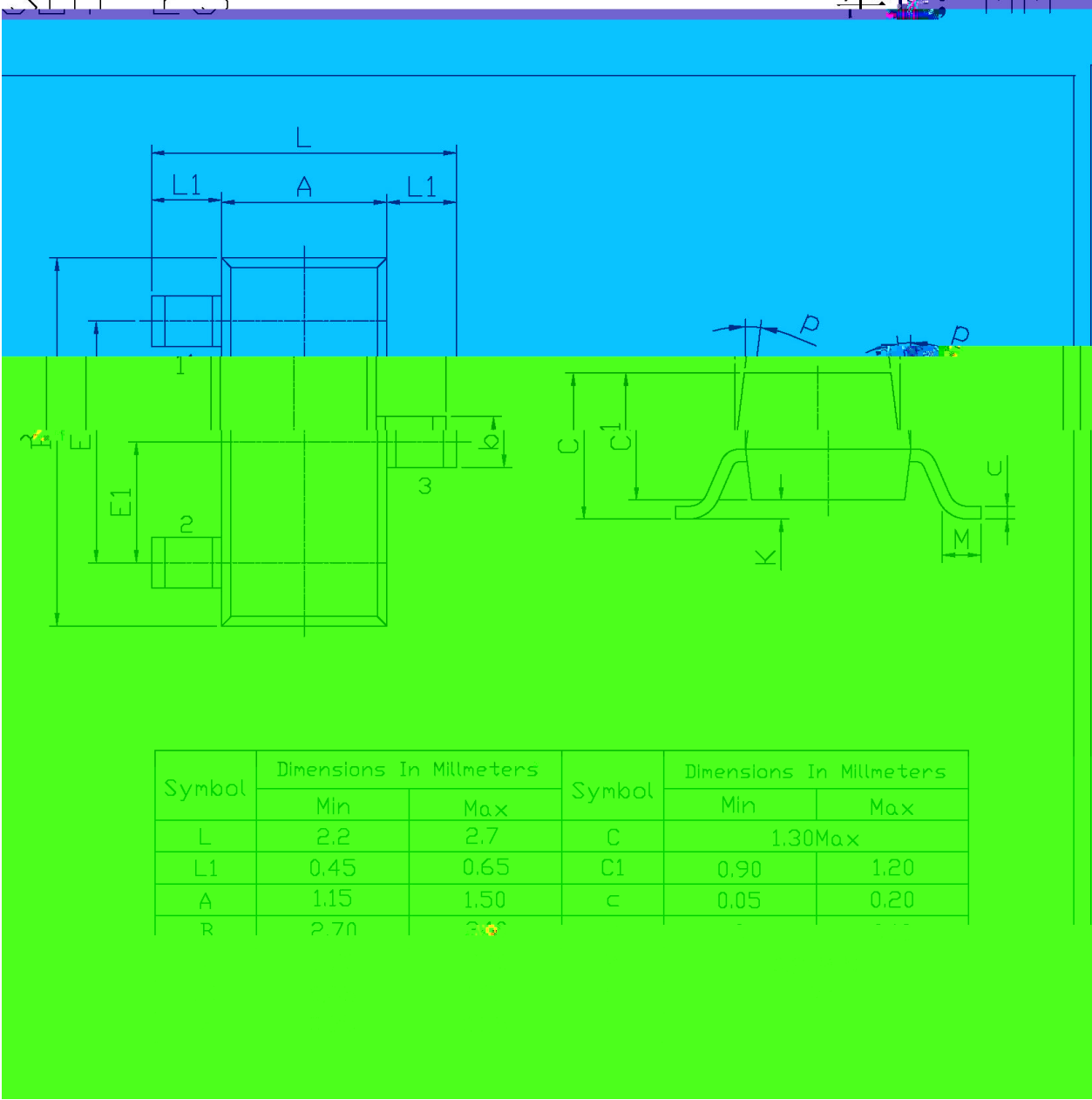
/ Electrical Characteristic Curve



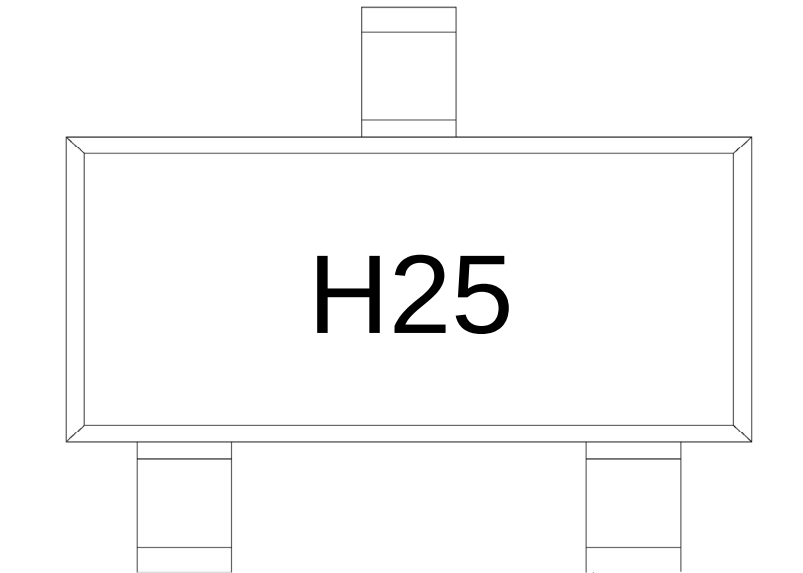
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



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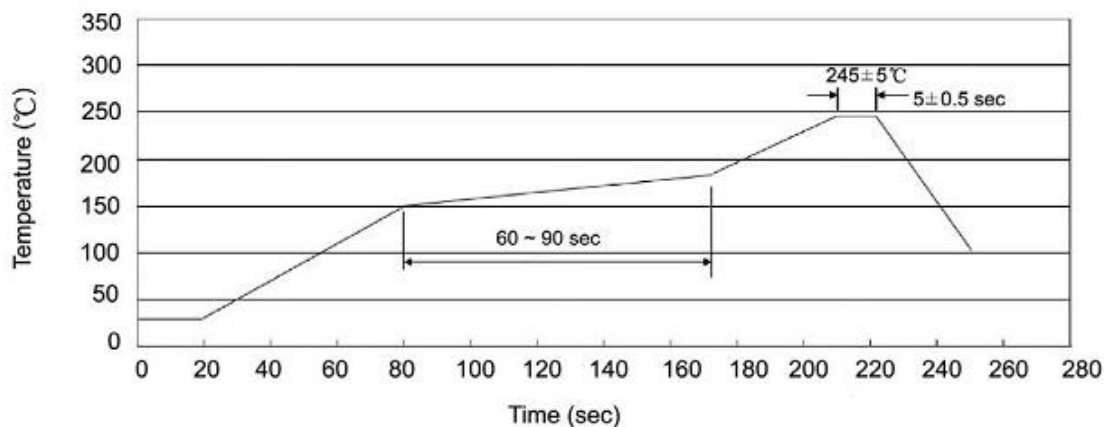
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Note:

H Company Code

25 Product Type Code

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



Note:

- | | | | | | |
|---|-------|-----|-----------|--------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , 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-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ **Notices**