"Yش / Descriptions

SOT-323 NPN Silicon NPN transistor in a SOT-323 Plastic Package.

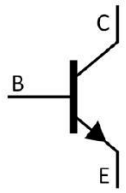
◕ È / Features

Low power surface mount applications.

¥ ٍ / Applications

General purpose amplifier.

ЛفّQ̃ɤ ع / Equivalent Circuit



ãÅ ؙ / Pinning

PIN1 Emitter PIN 2 Base PIN 3 Collector

ŧ. ʜ ڸ / Marking

h_{FE} Range	100~300
Marking	H1P

ώ ⁂ ⋾ Ặ / Absolute Maximum Ratings(Ta=25 ﻝ)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	75	V
Collector to Emitter Voltage	V_{CEO}	40	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	600	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

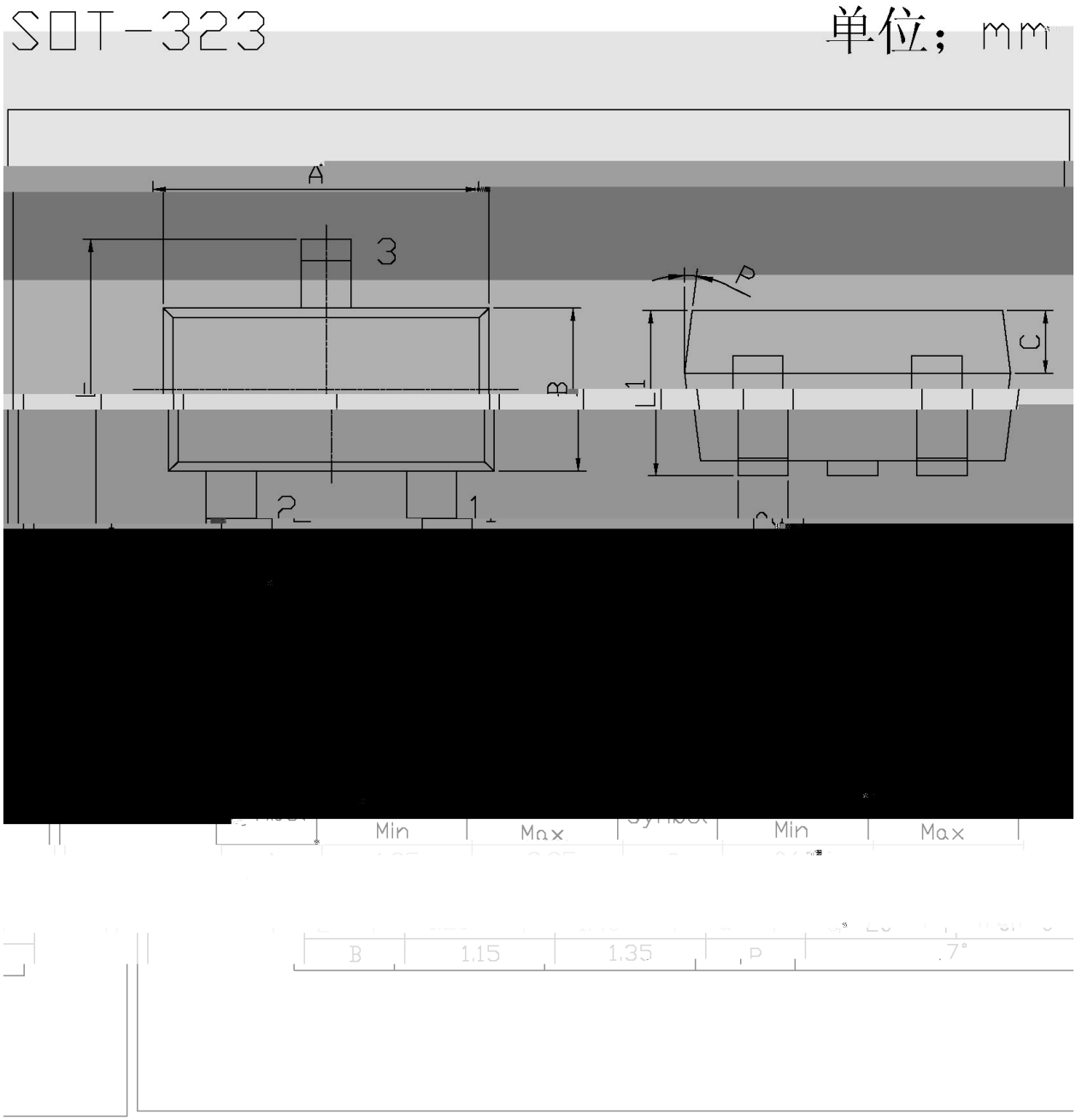
⸗ ⋀ ⋾ Ặ / Electrical Characteristics(Ta=25 ﻝ)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=10μA I_E=0	75			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=10mA I_B=0	40			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10μA I_C=0	6.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V I_E=0			0.01	μA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=5.0V I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=10V I_C=150mA *	100		300	
Collector to Emitter Saturation Voltage	$V_{CE(sat)\ (1)}$	I_C=150mA I_B=15mA			0.3	V
	$V_{CE(sat)\ (2)}$	I_C=500mA I_B=50mA			1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)\ (1)}$	I_C=150mA I_B=15mA	0.6		1.2	V
	$V_{BE(sat)\ (2)}$	I_C=500mA I_B=50mA			2.0	V
Collector output capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz			8.0	pF
Transition Frequency	f_T	I_C=20mA V_{CE}=20V f=100MHz	300			MHz
Turn-On Time	t_{on}	V_{CC}=30V V_{BE}=-0.5V I_C=150mA I_{B1}=15mA			35	ns
Turn-Off Time	t_{off}	V_{CC}=30V I_C=150mA I_{B1}=I_{B2}=15mA			285	ns

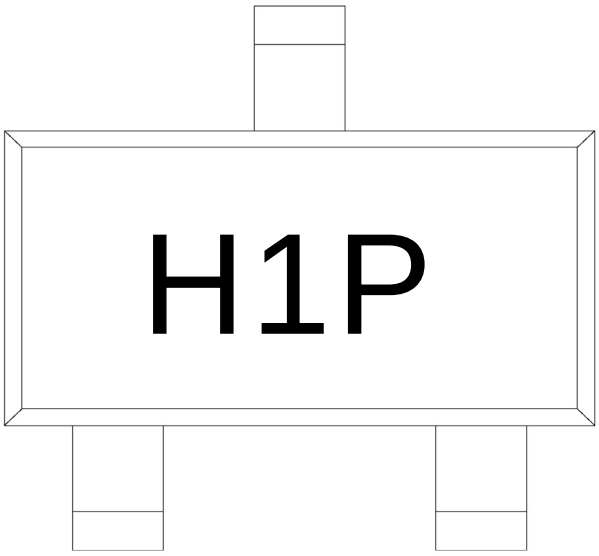
*Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

≠ ∃ ÃÁE ∀ ƒ / Electrical Characteristic Curve

ᵘ Ė Ồ Ļ ƒ / Package Dimensions



Ł. Ł Ω / Marking Instructions



H

1P

Note:

H: Company Code.

1P: Product Type.

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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.

ㅓ ŭ ɋ Ḙ ˋ Y Ţ / Resistance to Soldering Heat Test Conditions

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

ɒ Ŀ ≮ — / 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-323	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

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