/ Descriptions

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

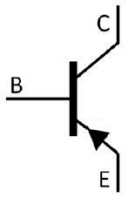
/ Features

Low current, Low voltage,HF Product.

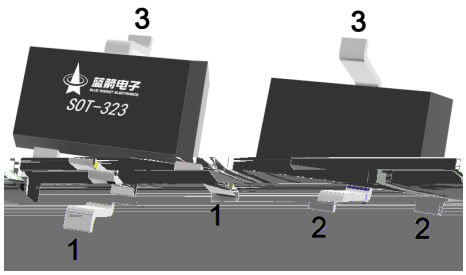
/ Applications

General purpose amplifier and switching.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

Marking	H2A

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-40	V
Collector to Emitter Voltage	V_{CEO}	-40	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

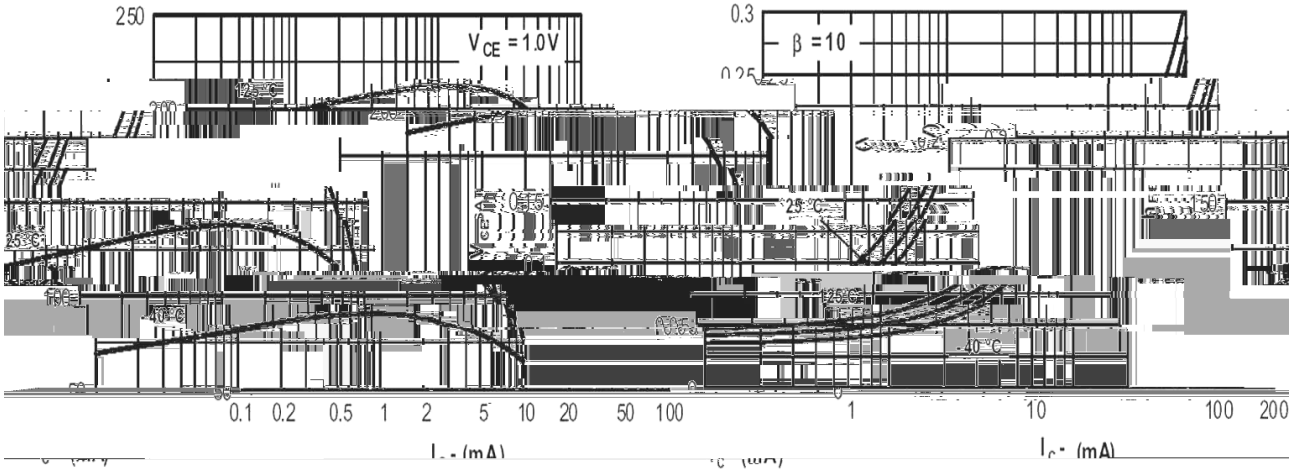
/ Electrical Characteristics(Ta=25)

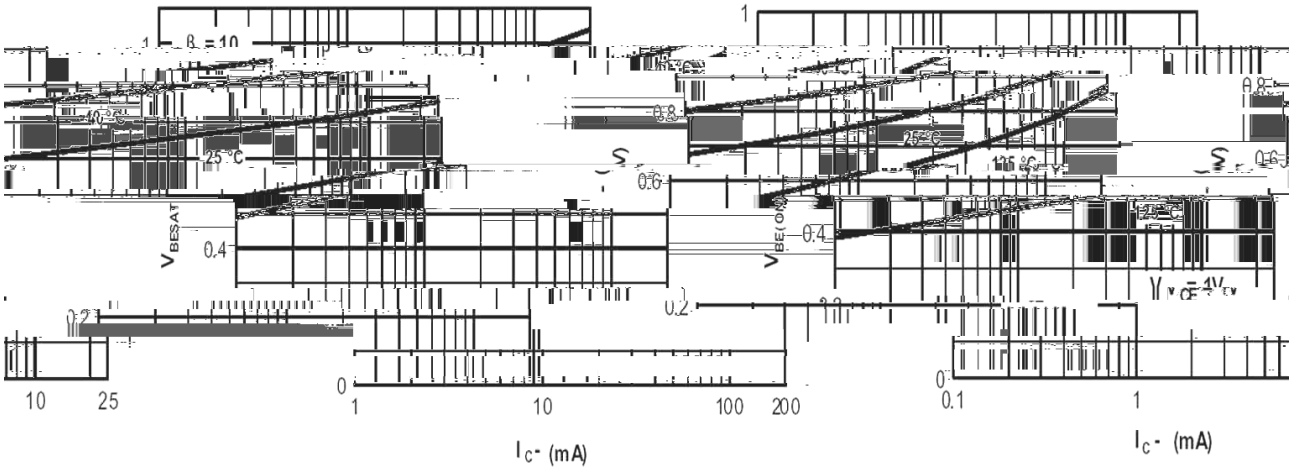
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=-10μA I_E=0	-40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=-1.0mA I_B=0	-40			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=-10μA I_C=0	-5.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-30V I_E=0			-0.05	μA
Emitter to Base Current	I_{EBO}	V_{EB}=-3.0V I_C=0			-0.05	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=-1.0V I_C=-10mA	100		300	
	$h_{FE(2)}$	V_{CE}=-1.0V I_C=-100mA	30			
	$h_{FE(3)}$	V_{CE}=-1.0V I_C=-50mA	60			
	$h_{FE(4)}$	V_{CE}=-1.0V I_C=-1.0mA	80			
	$h_{FE(5)}$	V_{CE}=-1.0V I_C=-0.1mA	60			
Collector to Emitter Saturation Voltage	$V_{CE(sat)\ (1)}$	I_C=-10mA I_B=-1.0mA			-0.25	V
	$V_{CE(sat)\ (2)}$	I_C=-50mA I_B=-5.0mA			-0.4	V
Base to Emitter Saturation Voltage	$V_{BE(sat)\ (1)}$	I_C=-10mA I_B=-1.0mA	-0.65		-0.85	V
	$V_{BE(sat)\ (2)}$	I_C=-50mA I_B=-5.0mA			-0.95	V

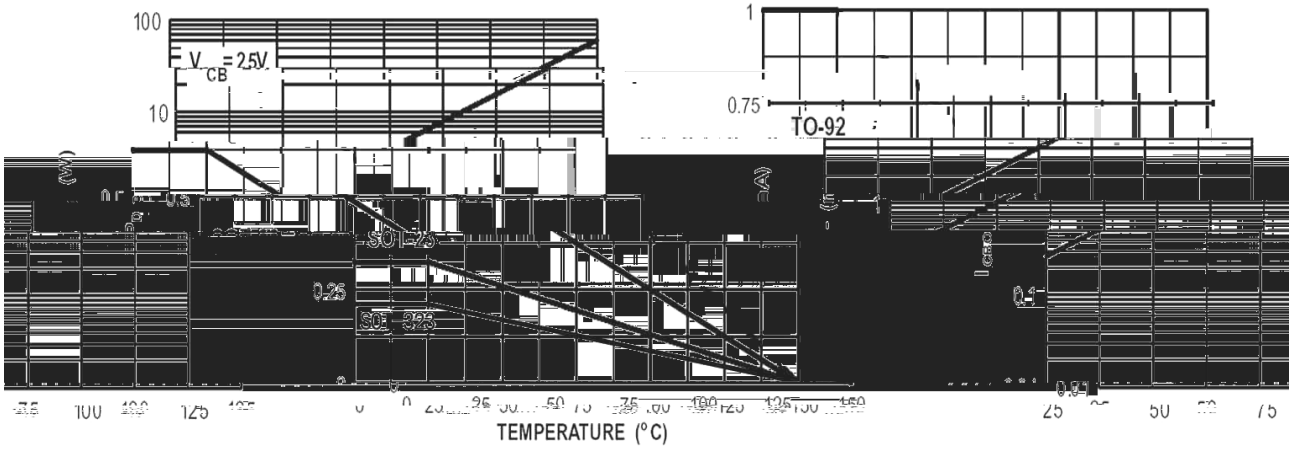
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Transition Frequency	f_T	I_C=-10mA V_{CE}=-20V f=100MHz	250			MHz
Collector output capacitance	C_{ob}	V_{CB}=-5.0V f=1.0MHz			4.5	pF
Storage Time	t_{stg}	V_{CC}=-3.0V I_C=-10mA I_{B1}=-I_{B2}=-1.0mA			225	ns
Fall Time	t_f	V_{CC}=-3.0V I_C=-10mA I_{B1}=-I_{B2}=-1.0mA			75	ns
Delay Time	t_d	V_{CC}=-3.0V V_{BE}=-0.5V I_C=-10mA I_{B1}=-1.0mA			35	ns
Rise Time	t_r	V_{CC}=-3.0V V_{BE}=-0.5V I_C=-10mA I_{B1}=-1.0mA			35	ns
Input Capacitance	C_{ib}	V_{EB}=-0.5V f=1.0MHz			10	pF

/ Electrical Characteristic Curve

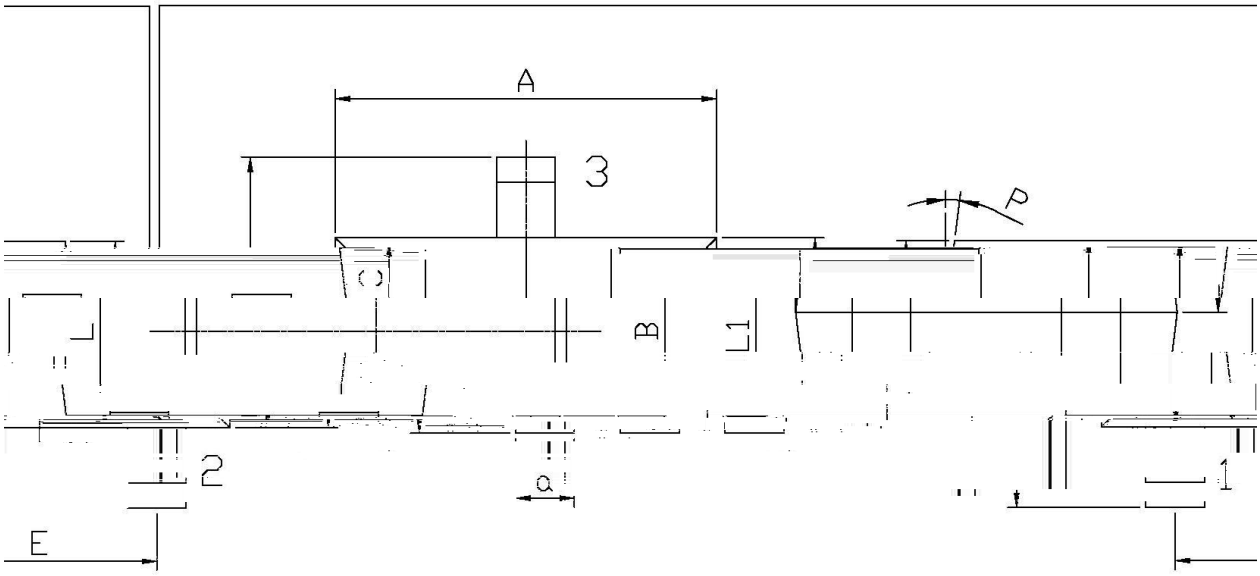






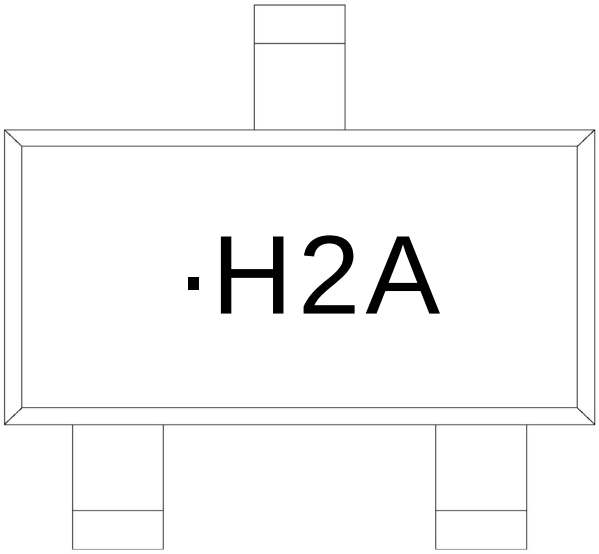
/ Package Dimensions

SOT-323 单位：mm



Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	Min	Max		Min	Max
	1.95	2.35	C	0.30	0.50
	2.00	2.2	L1	0.85	1.15
	1.20	1.40	α	0.20	0.40
	1.15	1.35	P	7°	

/ Marking Instructions



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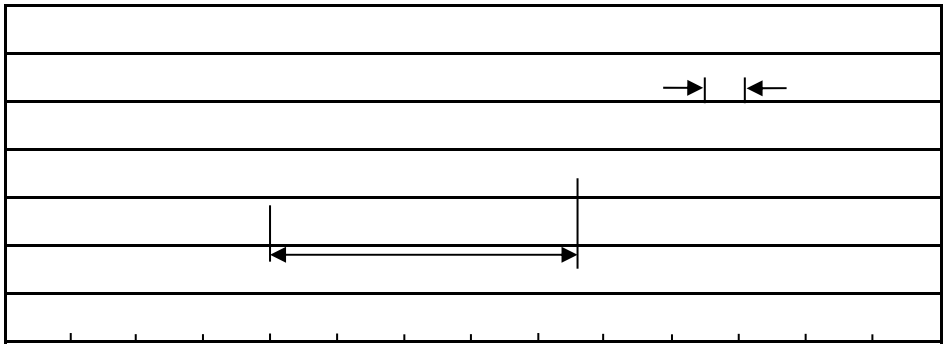
H

2A

Note:

·	Identify
H:	Company Code
2A:	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 mm³)
	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

/ Notices