



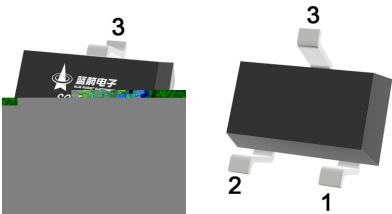
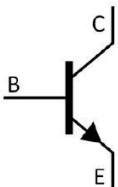


Rev.F Aug.-2022

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

Low current, Low voltage, HF Product.

General purpose amplifier and switching.



PIN1 Base      PIN 2 Emitter      PIN 3 Collector

Marking	• H1A
---------	-------



Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	40	V
Emitter to Base Voltage	$V_{EBO}$	6.0	V
Collector Current - Continuous	$I_C$	200	mA
Collector Power Dissipation	$P_C$	200	mW
Collector Power Dissipation*	* $P_C$	350	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

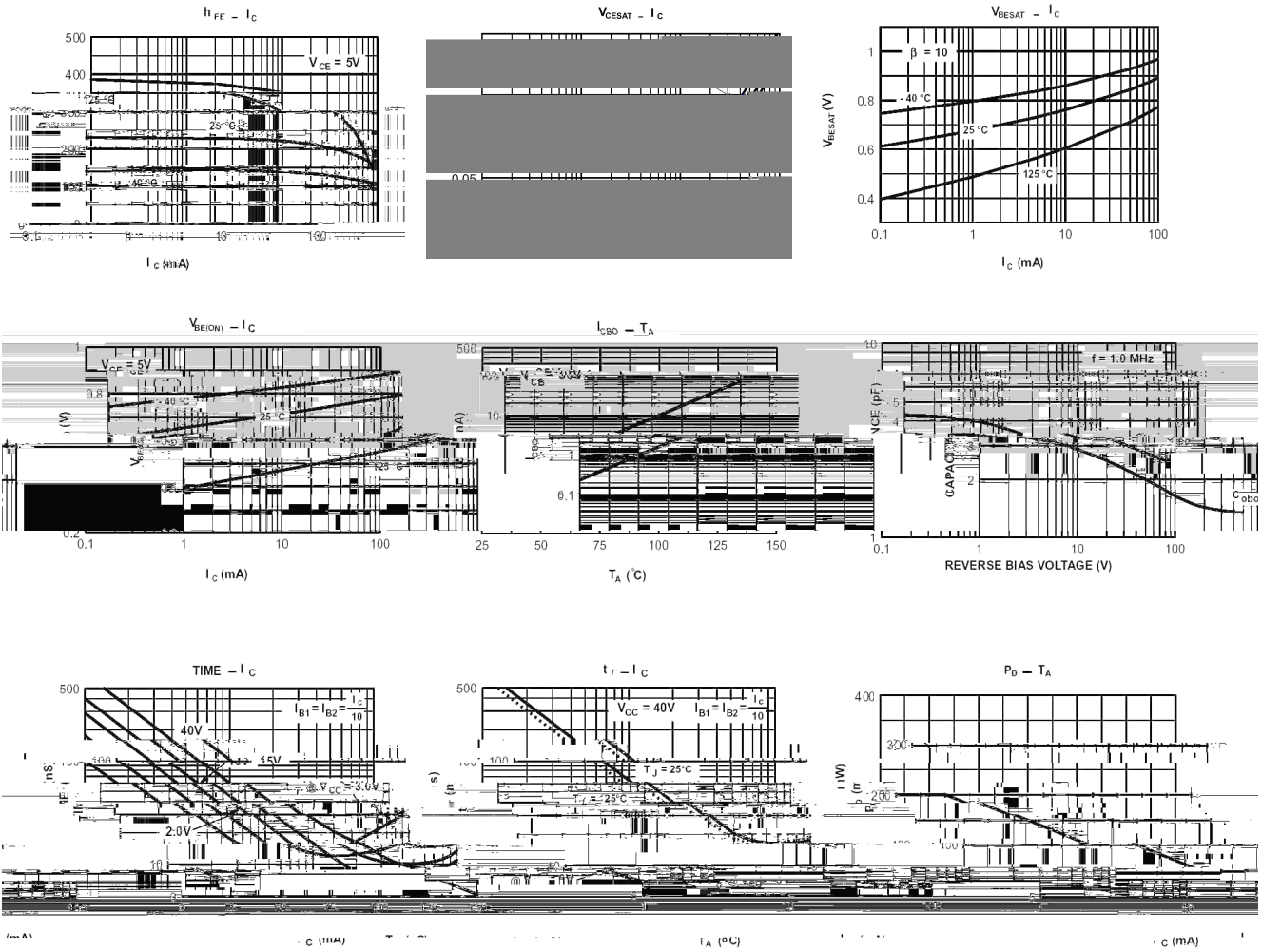
\* 7×5×0.6mm

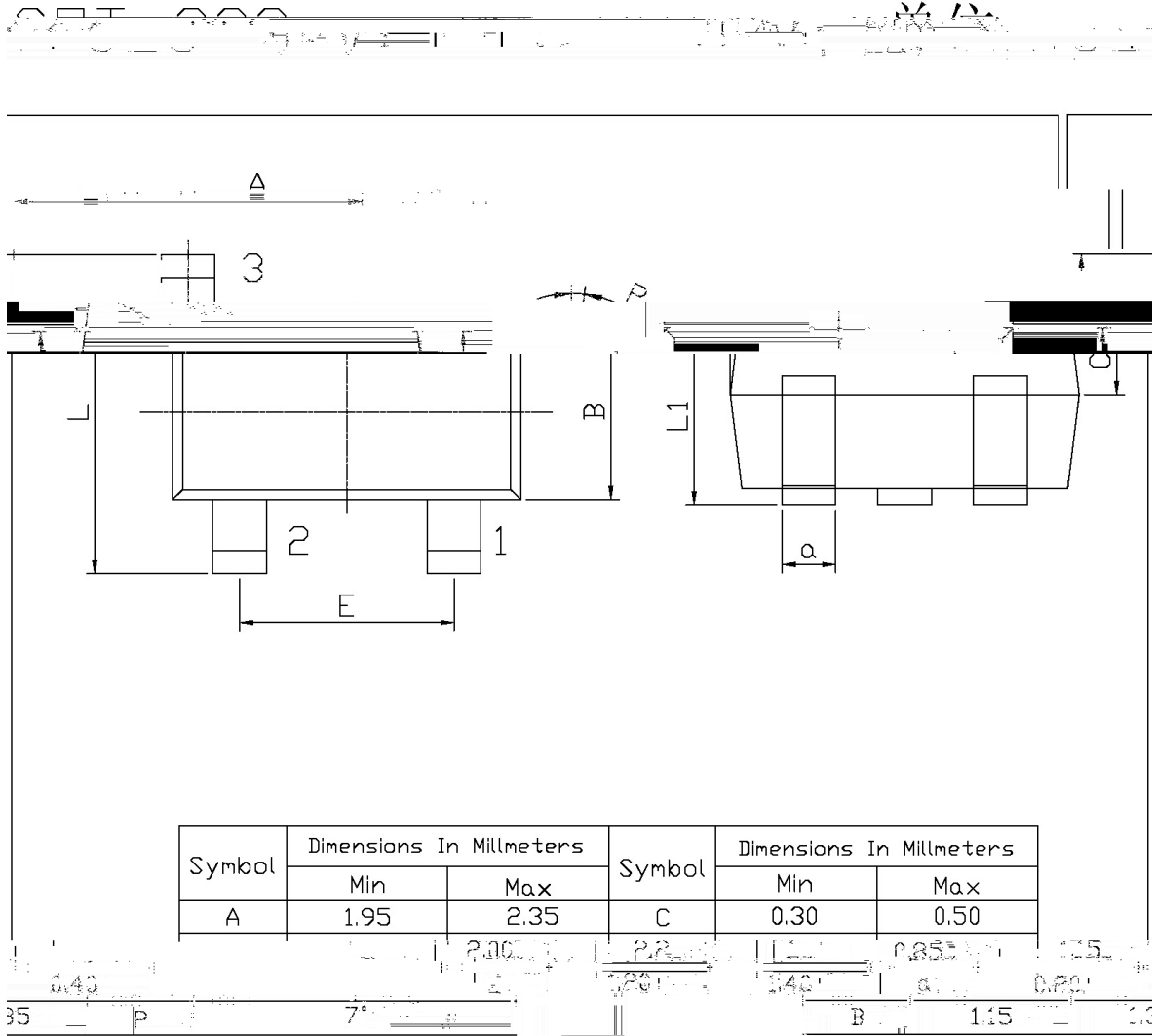
\*When mounted on a 7×5×0.6mm ceramic board

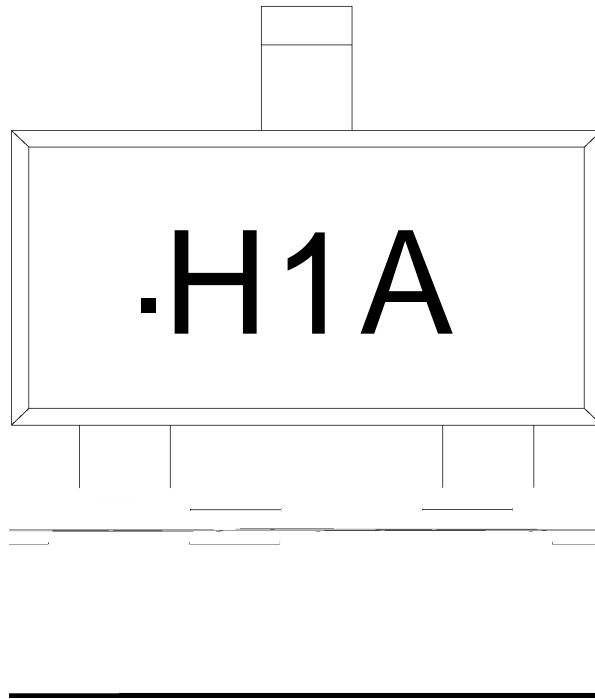
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=10\mu A$ $I_E=0$	60			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=1.0mA$ $I_B=0$	40			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=10\mu A$ $I_C=0$	6.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=30V$ $I_E=0$			0.05	$\mu A$
Emitter to Base Current	$I_{EBO}$	$V_{EB}=3.0V$ $I_C=0$			0.05	$\mu A$
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			
	$h_{FE(4)}$	$V_{CE}=1.0V$ $I_C=1mA$	70			
	$h_{FE(5)}$	$V_{CE}=1.0V$ $I_C=0.1mA$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=10mA$ $I_B=1.0mA$			0.2	V
	$V_{CE(sat)(2)}$	$I_C=50mA$ $I_B=5.0mA$		0.12	0.3	V



Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
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
Transition Frequency	$f_T$	$I_C=10mA$ $V_{CE}=20V$ $f=100MHz$	300			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=5.0V$ $f=1.0MHz$			4.0	pF
Storage Time	$t_{stg}$	$V_{CC}=3.0V$ $I_C=10mA$ $I_{B1}=-I_{B2}=1.0mA$			200	ns
Fall Time	$t_f$	$V_{CC}=3.0V$ $I_C=10mA$ $I_{B1}=-I_{B2}=1.0mA$			50	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	$C_{ib}$	$V_{EB}=0.5V$ $f=1.0MHz$			8.0	pF







.

H

1A

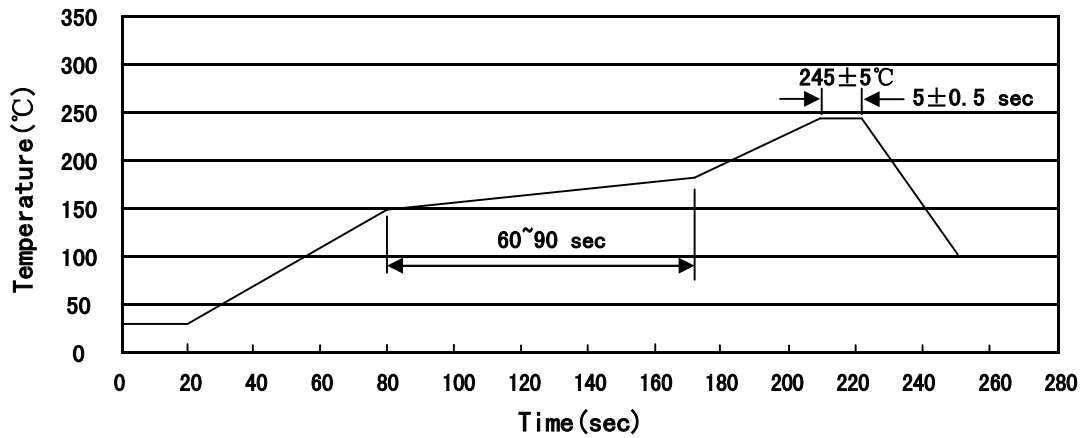
Note:

.

Identify

H: Company Code

1A: Product Type



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.            |

260±5

10±1 sec.

Temp.:260±5°C

Time:10±1 sec

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	只卷盘	卷盘盒	只盒	盒箱	只箱		盒	箱
						"		