

/ Descriptions

SOT-23 PNP Silicon PNP transistor in a SOT-23 Plastic Package.

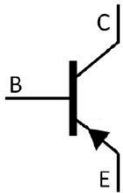
/ Features

Low saturation voltage, large collector current.

/ Applications

General purpose amplifier and muting switch application.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	A	B
h_{FE} Range	300 600	500 1000
Marking	HGAA	HGAB

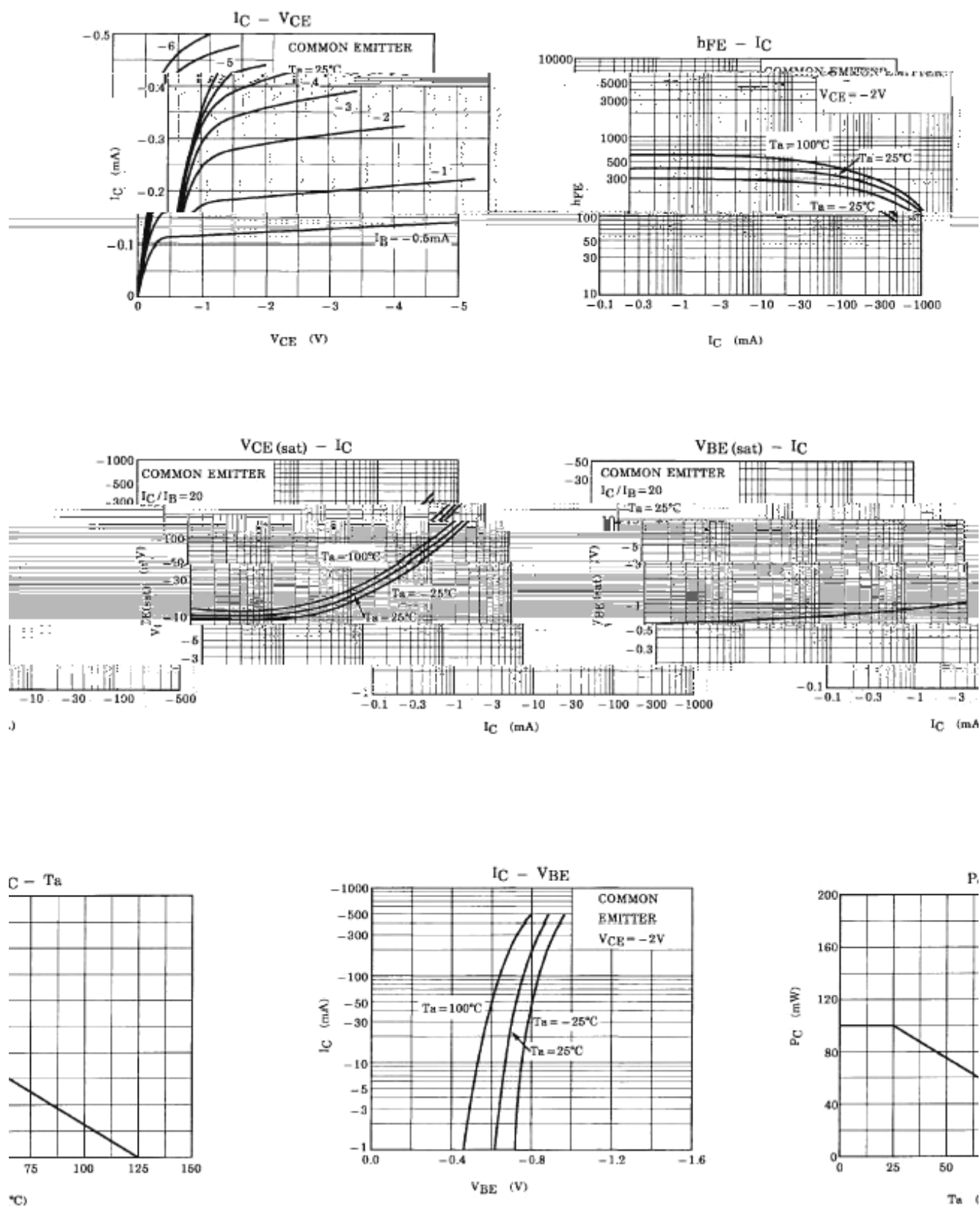
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-15	V
Collector to Emitter Voltage	V_{CEO}	-12	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current	I_C	-400	mA
Base Current	I_B	-50	mA
Collector Power Dissipation	P_C	100	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 Cut-Off Current	I_{CBO}	$V_{CB}=-15V$ $I_E=0$			-0.1	A
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=-5.0V$ $I_C=0$			-0.1	A
DC Current Gain	h_{FE}	$V_{CE}=-2.0V$ $I_C=-10mA$	300		1000	
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-10mA$ $I_B=-0.5mA$		-0.015	-0.03	V
	$V_{CE(sat)(2)}$	$I_C=-200mA$ $I_B=-10mA$		-0.11	-0.25	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-200mA$ $I_B=-10mA$		-0.87	-1.2	V
Transition Frequency	f_T	$V_{CE}=-2.0V$ $I_E=-10mA$	80	130		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		4.2		pF
Collector-Emitter On Resistance	R_{on}	$I_B=-1.0mA$ $V_{in}=-1.0V$ $V_{rms}f=1KHz$		0.9		
Switching time	Turn-On Time	t_{on}	$I_{B1}=-I_{B2}=5.0mA$	40		ns
	Storage Time	T_{stg}		280		
	Fall Time	t_f		45		

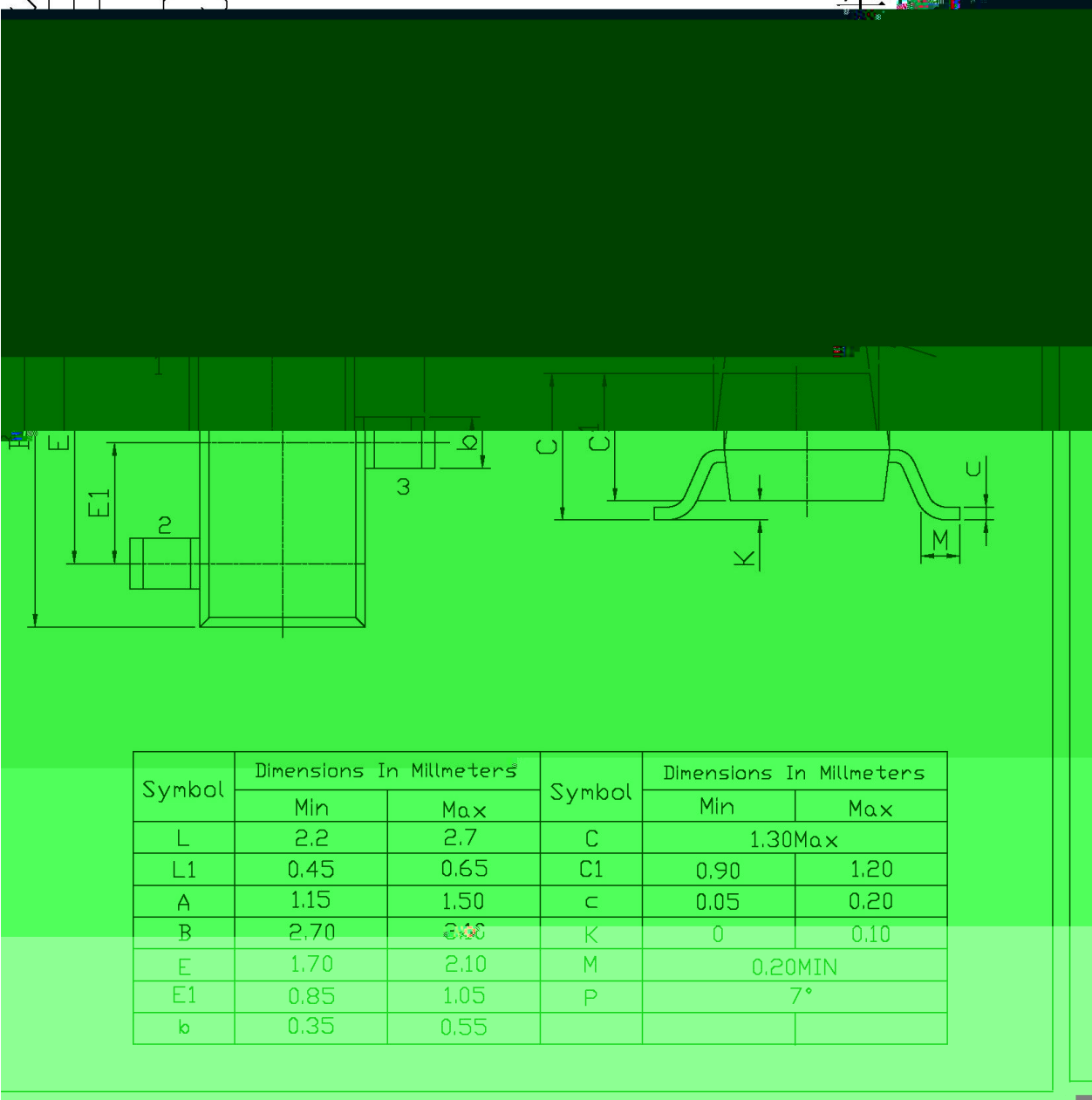
/ Electrical Characteristic Curve



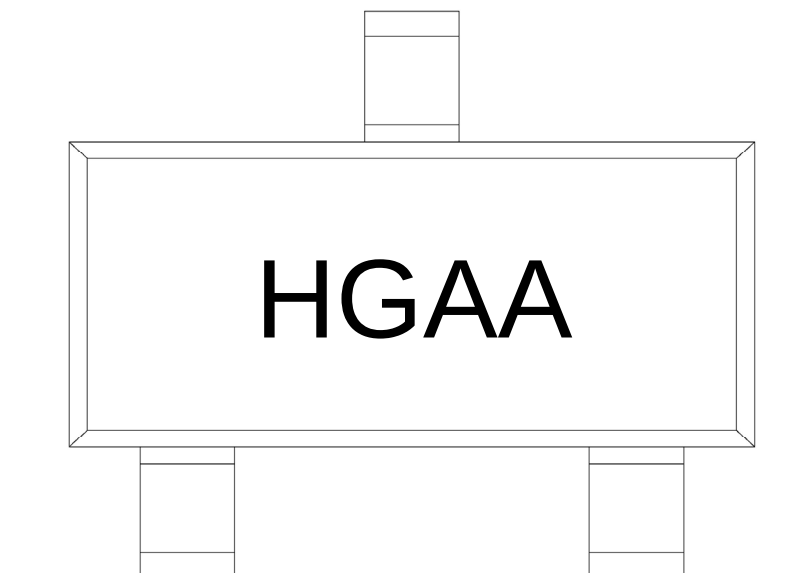
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



H

GA

A: h_{FE}

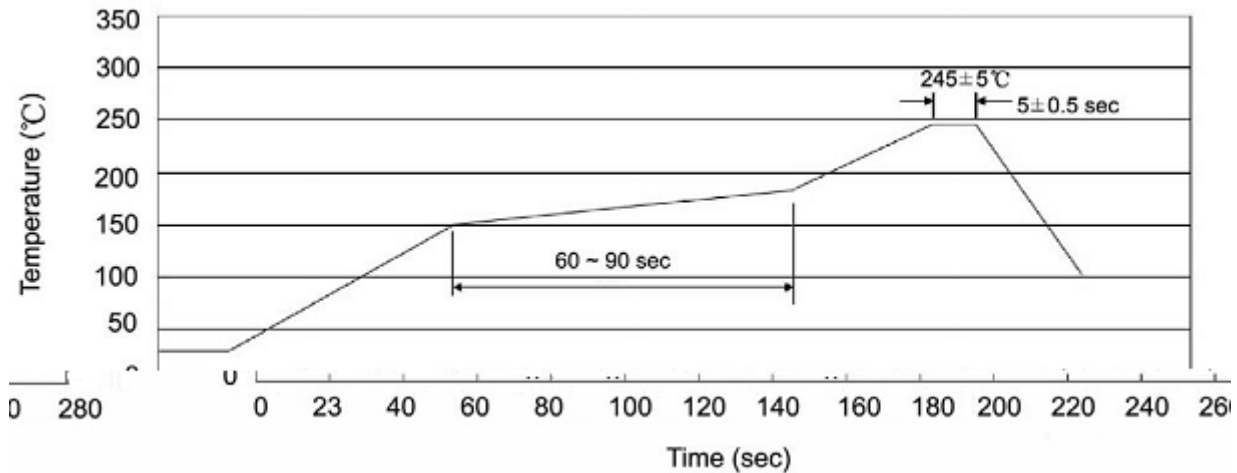
Note:

H: Company Code.

GA: Product Type Code

A: h_{FE} Classifications Symbol Code

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



Note:

- | | | | | | |
|---|-------|-----|----|-----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱

/ **Notices**