

/ Descriptions

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

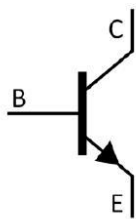
/ Features

8550M
Complementary pair with 8550M,HF Product.

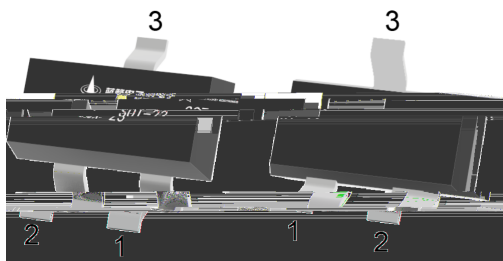
/ Applications

Power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ hFE Classifications & Marking

hFE Classifications Symbol	B	C	D
hFE Range	85~160	120~200	160~300
Marking	HY1B	HY1C	HY1D

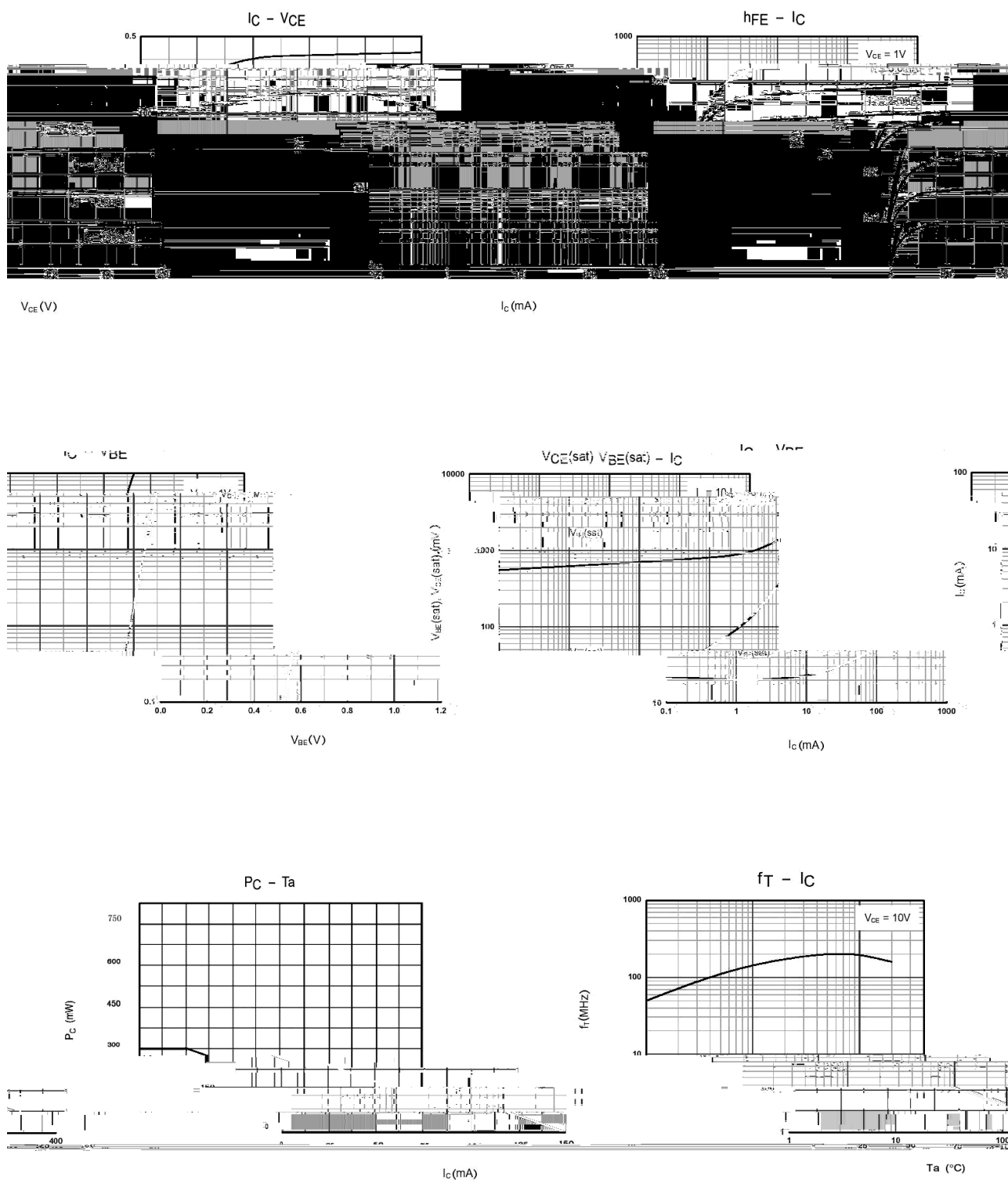
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	1.5	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	300	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}	$I_C=0.1mA$ $I_E=0$	40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=2.0mA$ $I_B=0$	25			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_C=0.1mA$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=35V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=6.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=100mA$	85		300	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=800mA$	40			
	$h_{FE(3)}$	$V_{CE}=1.0V$ $I_C=5.0mA$	45			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=800mA$ $I_B=80mA$		0.28	0.5	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=1.0V$ $I_C=10mA$		0.66	1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=800mA$ $I_B=80mA$		0.98	1.2	V
Transition Frequency	f_T	$I_C=50mA$ $V_{CE}=10V$	100	190		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		9.0		pF

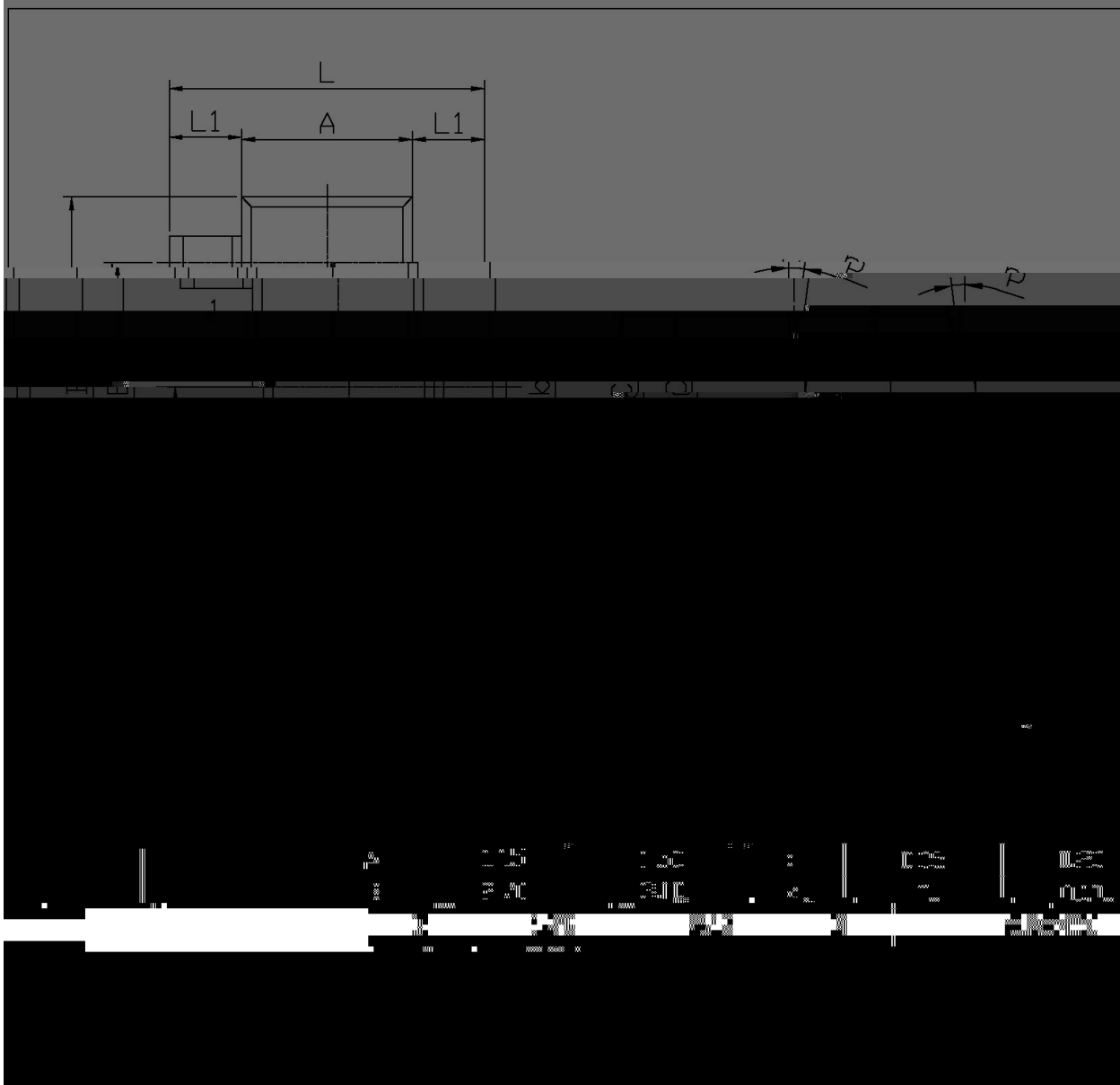
/ Electrical Characteristic Curve



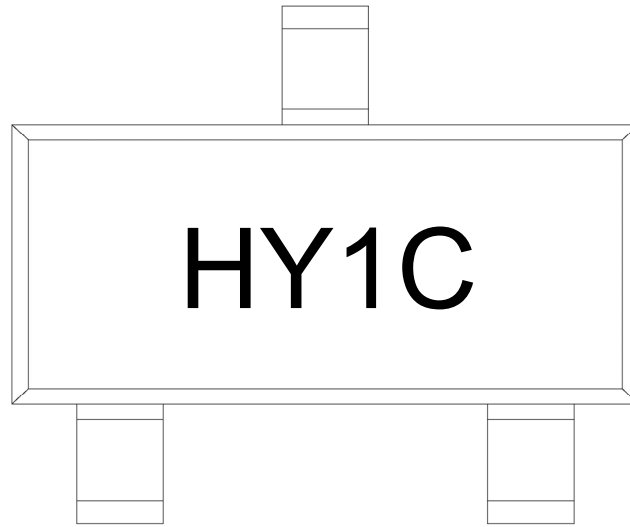
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



H

Y1

C h_{FE}

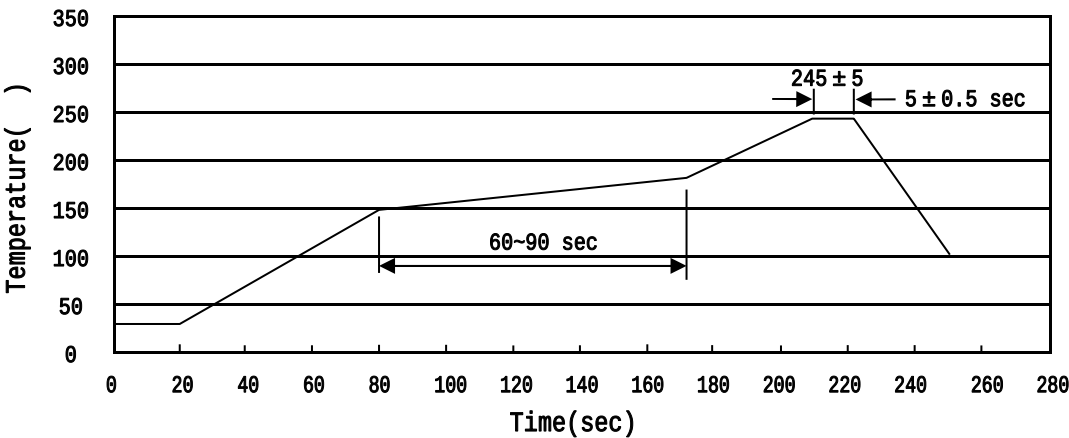
Note:

H: Company Code

Y1: Product Type

C: h_{FE} Classifications Symbol 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