

/ Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

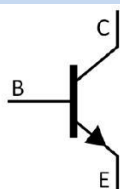
/ Features

Large current capacity and wide ASO.

/ Applications

Small signal general purpose amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	D	E	F	G	H
h_{FE} Range	60 120	100 200	160 320	280 560	480 960
Marking	H53D	H53E	H53F	H53G	H53H

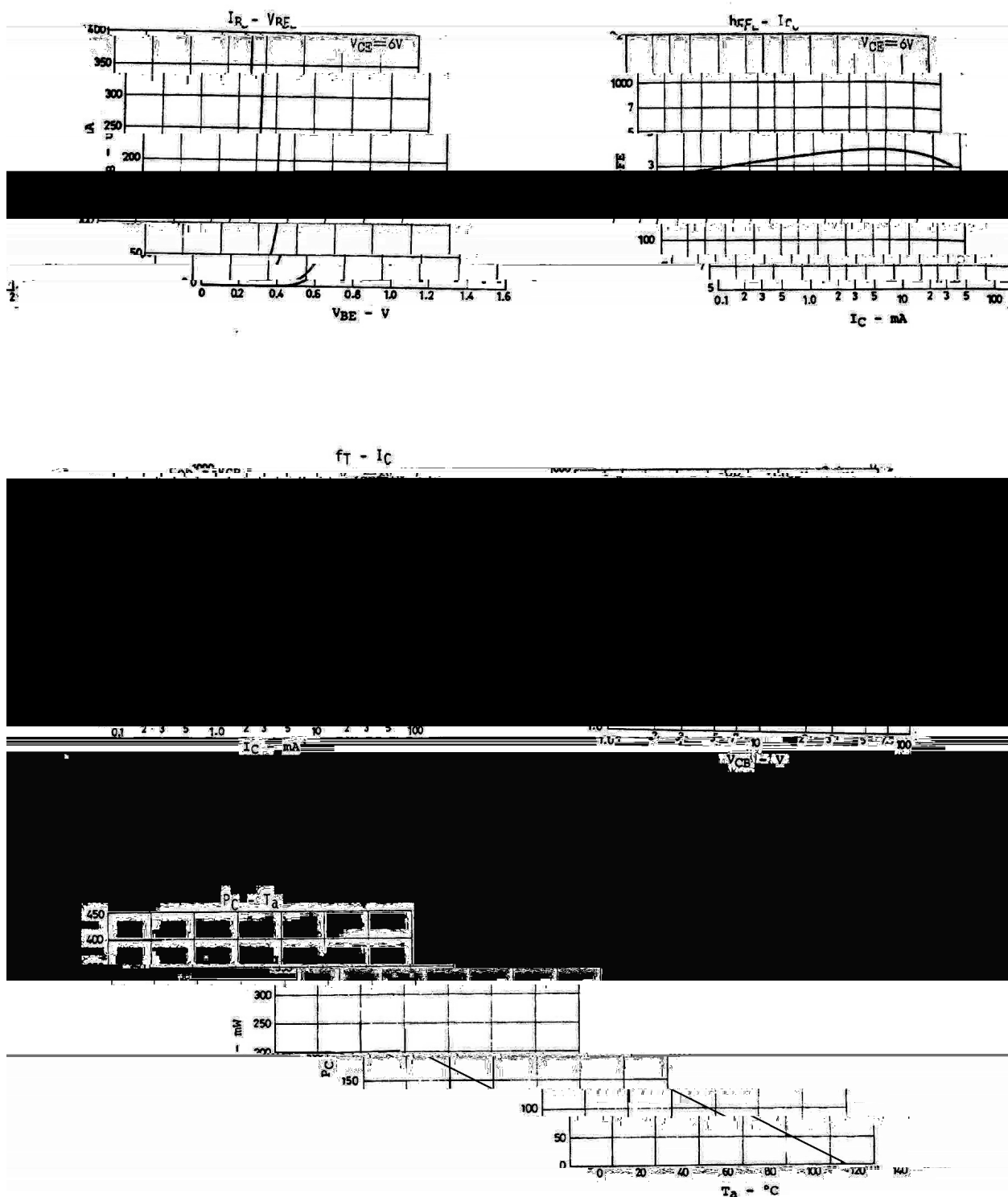
/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Collector to Base Voltage	2SC536M 2SC536KM	V_{CBO}	40 55	V
Collector to Emitter Voltage	2SC536M 2SC536KM	V_{CEO}	30 50	V
Emitter to Base Voltage		V_{EBO}	5.0	V
Collector Current		I_C	100	mA
Collector Current(pulse)		I_{CP}	300	mA
Collector Power Dissipation		P_C	250	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}	$V_{CB}=35V$ $I_E=0$			1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=4.0V$ $I_C=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=6.0V$ $I_C=1.0mA$	60		960	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50mA$ $I_B=5.0mA$			0.5	V
Transition Frequency	f_T	$V_{CE}=6.0V$ $I_C=1.0mA$		100		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=6.0V$ $f=1.0MHz$ $I_E=0$		3.5		pF
Collector- Base Time Constant	$C_{C-rbb'}$	$V_{CB}=6.0V$ $f=31.9MHz$ $I_C=1.0mA$		250		pS

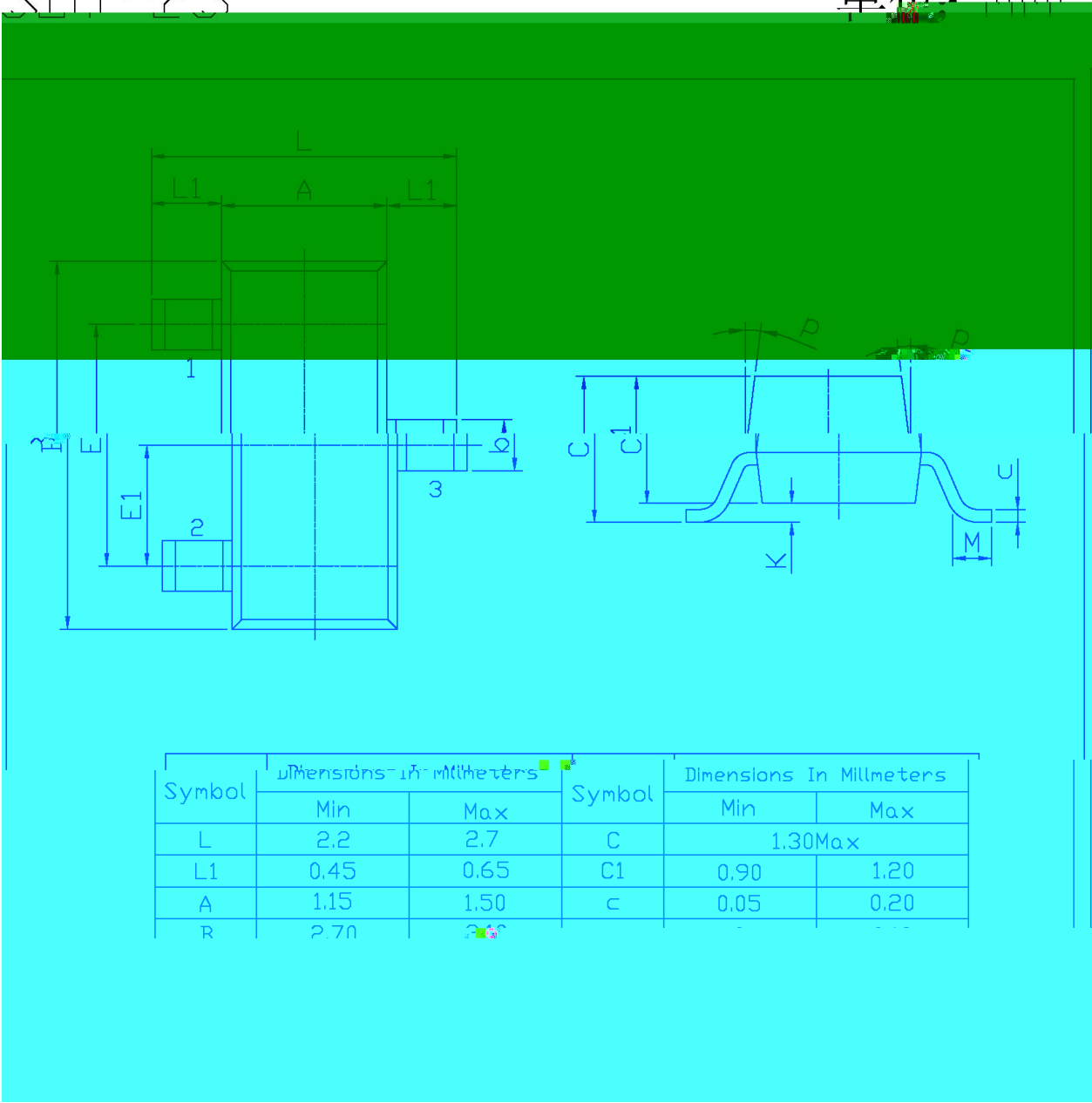
/ Electrical Characteristic Curve



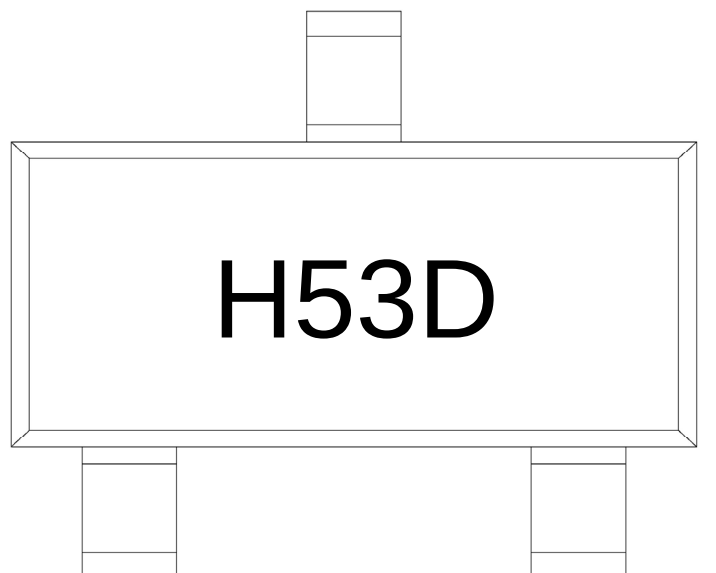
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



h_{FE}

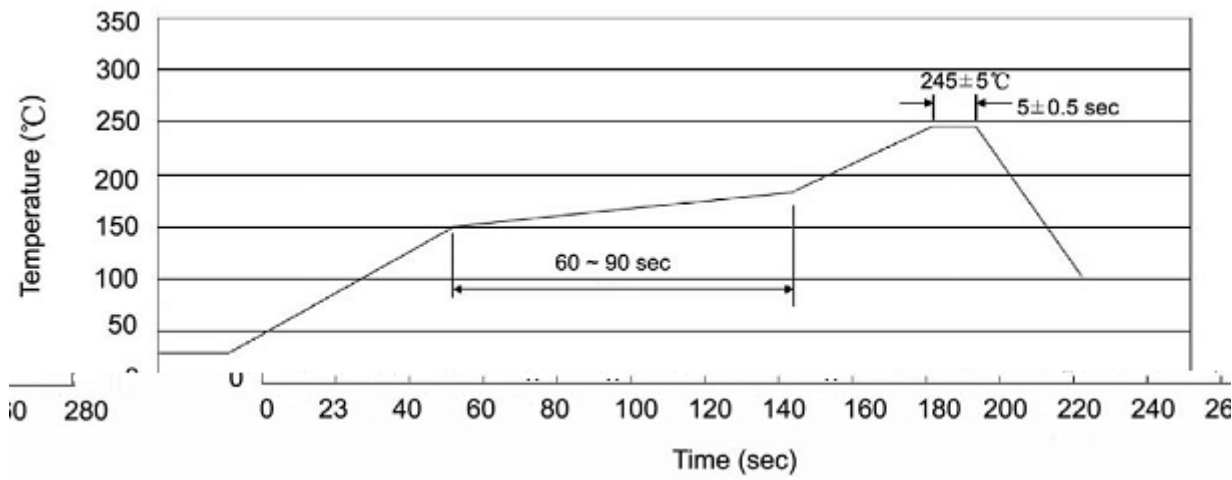
Note:

Company Code

Product Type Code

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)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices