

/ Descriptions

Silicon PNP transistor in a SOT-23 Plastic Package.

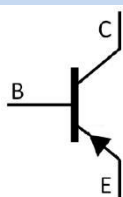
/ Features

Low $V_{CE(sat)}$, Complementary pair with FMMT491.

/ Applications

Medium power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ Marking

h_{FE} Range	100~300
Marking	H591

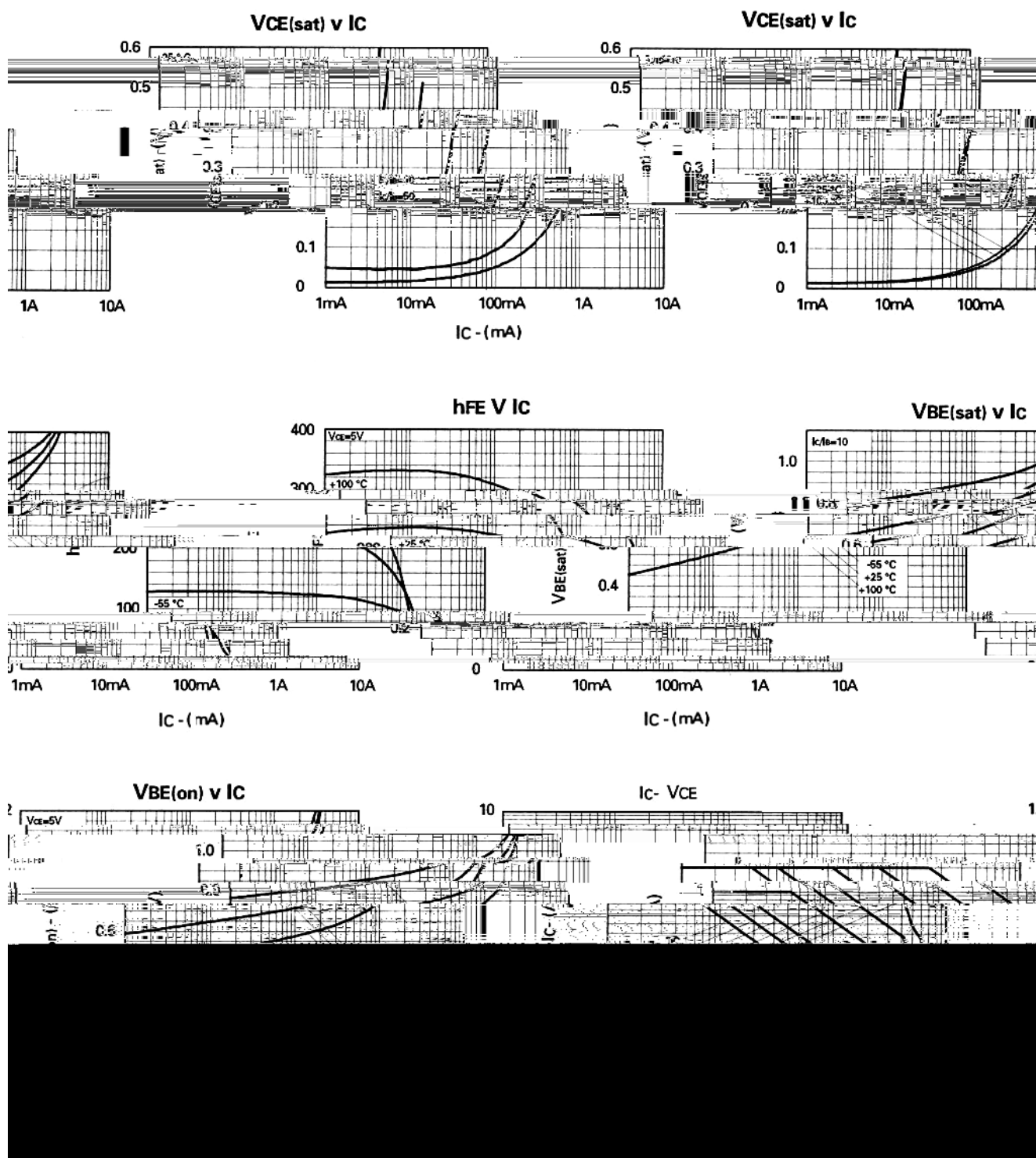
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-1.0	A
Peak Collector Current	I_{CM}	-2.0	A
Base Current	I_B	-200	mA
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C = -100\mu A$ $I_B = 0$	-80			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C = -10mA$ $I_E = 0$	-60			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E = -100\mu A$ $I_C = 0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -60V$ $I_E = 0$			0.1	μA
Collector Cut-Off Current	I_{CES}	$V_{CES} = -60V$ $I_E = 0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB} = -4.0V$ $I_E = 0$			0.1	μA
DC Current Gain	$*h_{FE(1)}$	$V_{CE} = -5.0V$ $I_C = -500mA$	100		300	
	$*h_{FE(2)}$	$V_{CE} = -5.0V$ $I_C = -1.0mA$	100			
	$*h_{FE(3)}$	$V_{CE} = -5.0V$ $I_C = -1.0A$	80			
	$*h_{FE(4)}$	$V_{CE} = -5.0V$ $I_C = -2.0A$	15			
Collector to Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C = -500mA$ $I_B = -50mA$			-0.3	V
	$V_{CE(sat) (2)}$	$I_C = -1.0A$ $I_B = -100mA$			-0.6	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = -1.0A$ $I_B = -100mA$			-1.2	V
Base-Emitter On Voltage	$V_{BE(ON)}$	$V_{CE} = -5.0V$ $I_C = -1.0A$			-1.0	V
Transition Frequency	f_T	$V_{CE} = -10V$ $I_C = -50mA$ $f = 100MHz$	150			MHz
Collector-Base Breakdown Voltage	C_{obo}	$V_{CB} = -10V$ $f = 1.0MHz$			10	pF

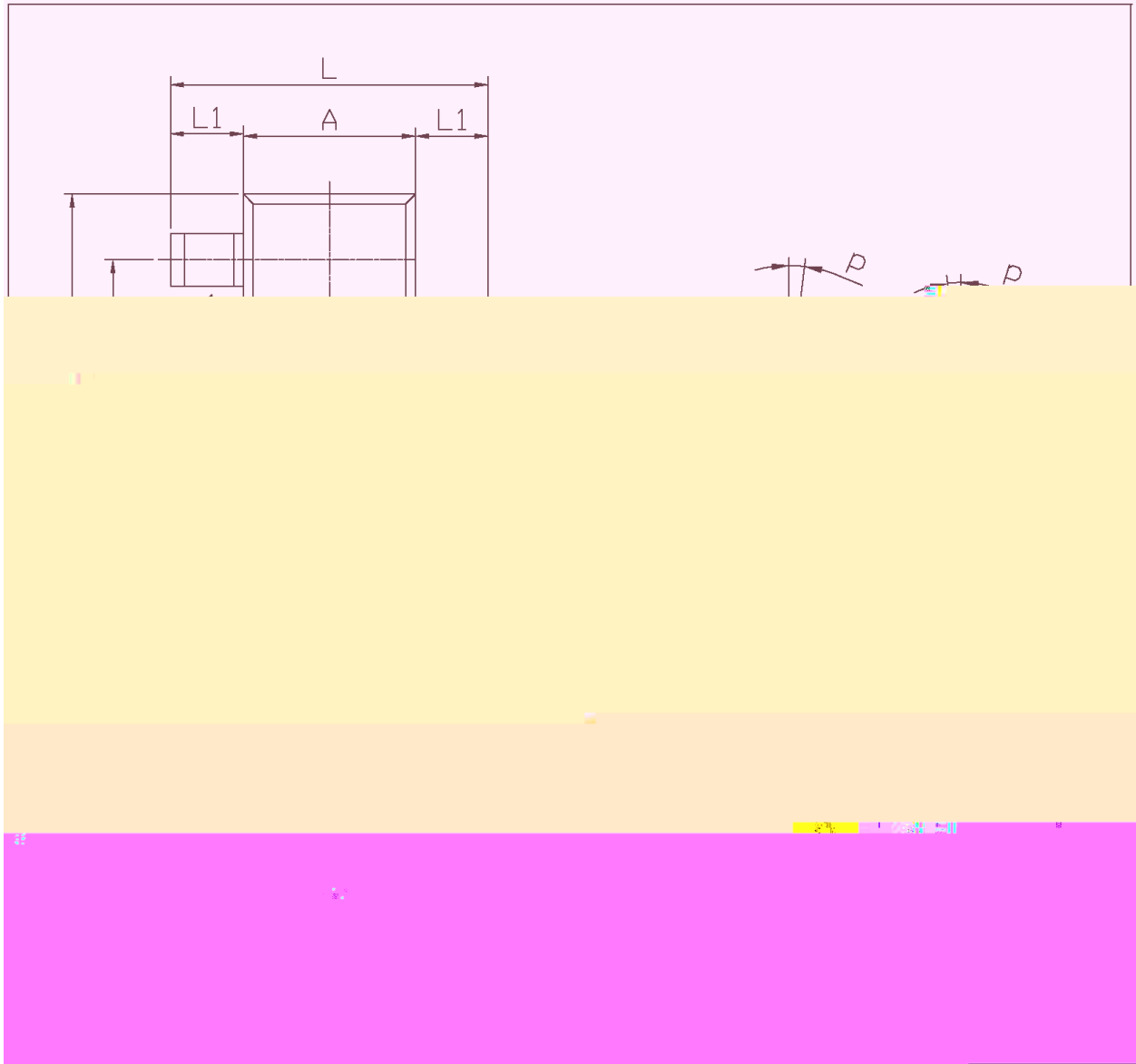
/ Electrical Characteristic Curve



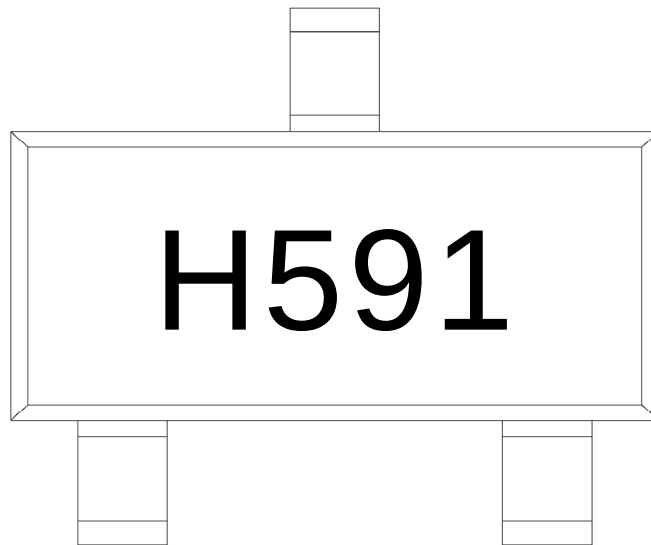
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



H

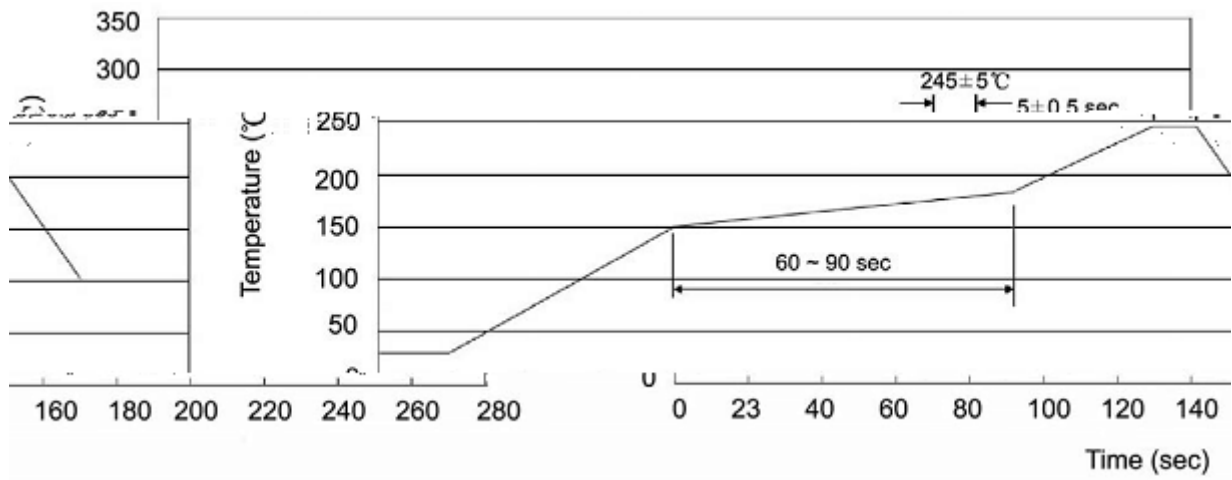
591

Note:

H: Company Code.

591: Product Type 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