

MMBT5551

Rev.G Apr.-2021

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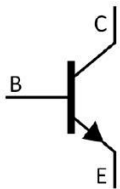
SOT-23 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-23 Plastic Package.

击穿电压高,可与 MMBT5401 互补。

High voltage, complementary pair with MMBT5401.

用于普通高压放大。

General purpose high voltage amplifier.



PIN1 : Base

PIN 2 :

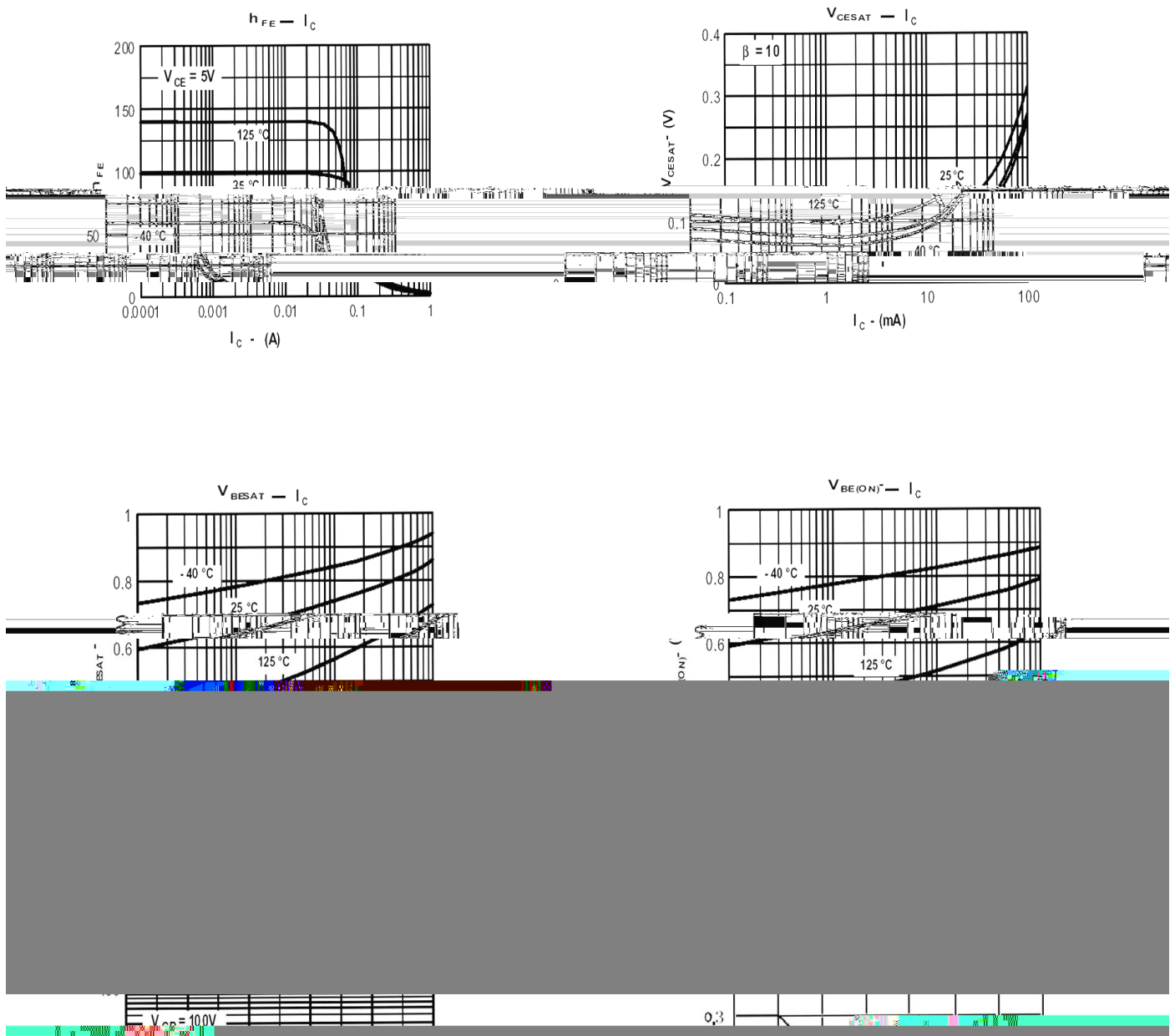
/ Absolute Maximum Ratings(Ta=25)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	180	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	600	mA
Base Current	I_B	300	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

/ Electrical Characteristics(Ta=25)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=180V$ $I_E=0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=6.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=10mA$	50	200	400	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=50mA$	20	160		
	$h_{FE(3)}$	$V_{CE}=5.0V$ $I_C=1.0mA$	40	190		
Collector-Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C=10mA$ $I_B=1.0mA$		0.06	0.15	V
	$V_{CE(sat) (2)}$	$I_C=50mA$ $I_B=5.0mA$		0.09	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat) (1)}$	$I_C=10mA$ $I_B=1.0mA$		0.7	1.0	V
	$V_{BE(sat) (2)}$	$I_C=50mA$ $I_B=5.0mA$		0.8	1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=10mA$		0.68	0.75	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=10mA$	50	110		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		2.2	5.0	pF
Turn-on Time	t_{on}	$I_C=100mA$ $I_{B1}=-I_{B2}=10mA$		0.3		μs
Turn-off Time	t_{off}			0.4		μs
Storage Time	t_{stg}			0.2		μs

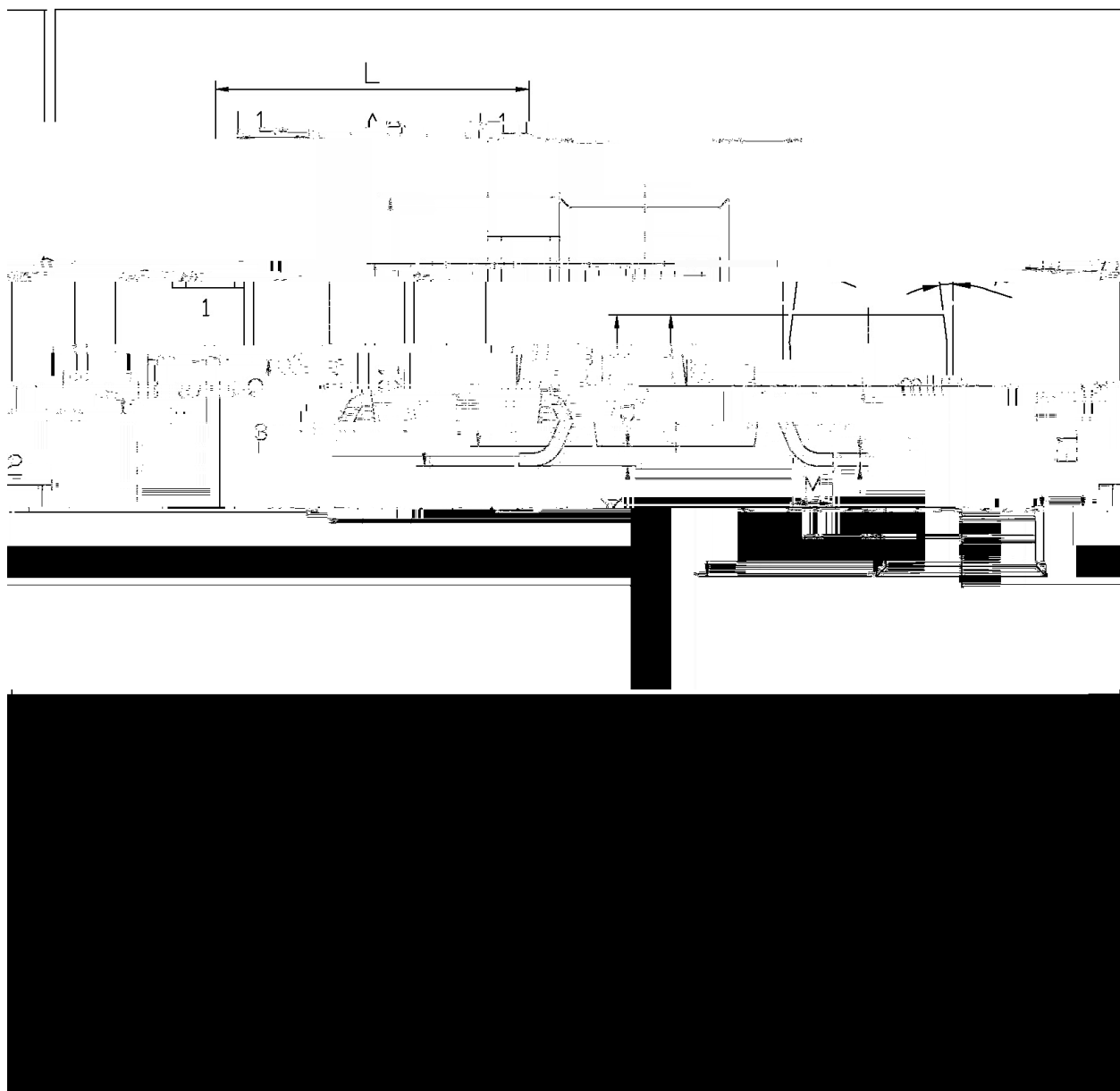
/ Electrical Characteristic Curve

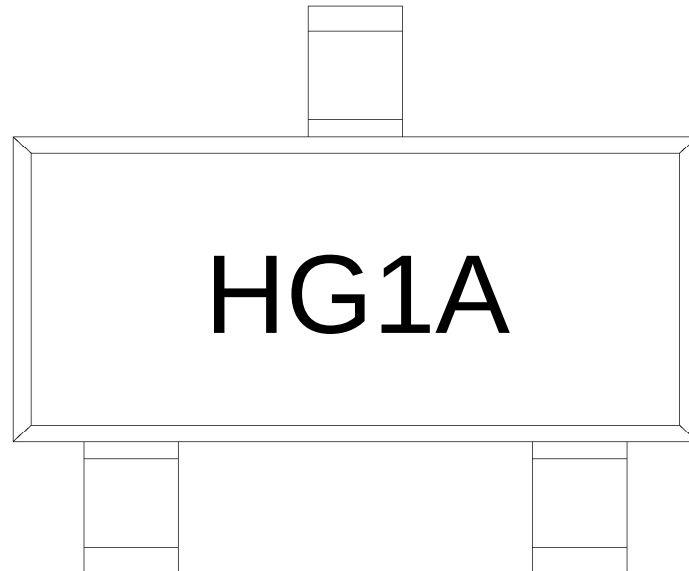


/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions

说明：

H： 为公司代码

G1： 为型号代码

A： 为 h_{FE} 档次代码

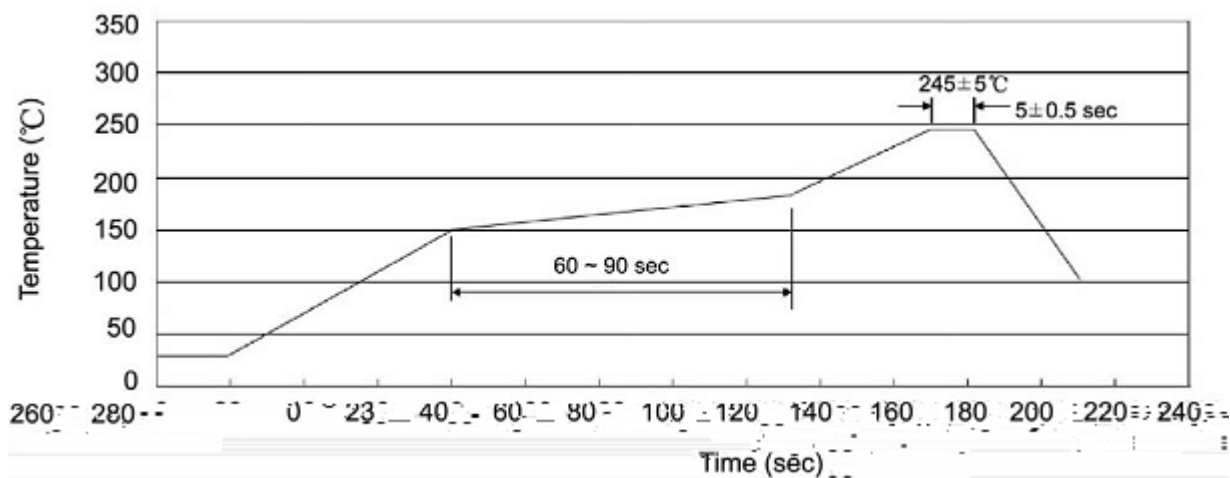
Note:

H： Company Code

G1： 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°C, Time:60~90sec. |
| 2 | 245±5 | | 5±0.5sec; | 2.Peak Temp.:245±5°C, Duration:5±0.5sec. | |
| 3 | 2 | 10°C/sec. | | 3. Cooling Speed: 2~10°C/sec. | |

/ Resistance to Soldering Heat Test Conditions

260±5°C

10±1 sec.

Temp.:260±5°C

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						7" ×8	180×120×180	390×385×205