

MMBT589

Rev.F Apr.-2017

/ Descriptions

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

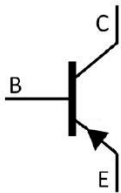
/ Features

Large current, surface mount device.

/ Applications

Switching for high current applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

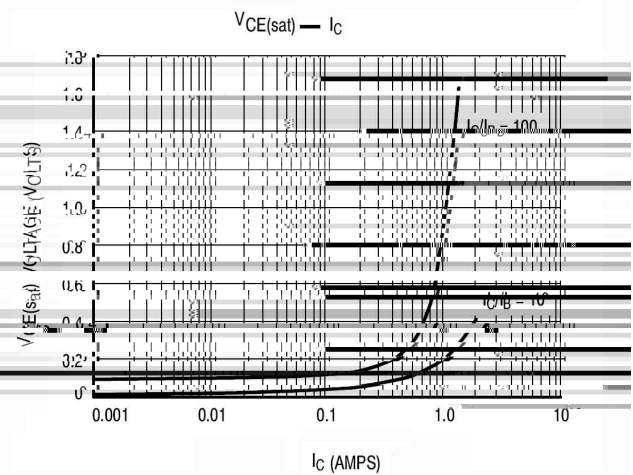
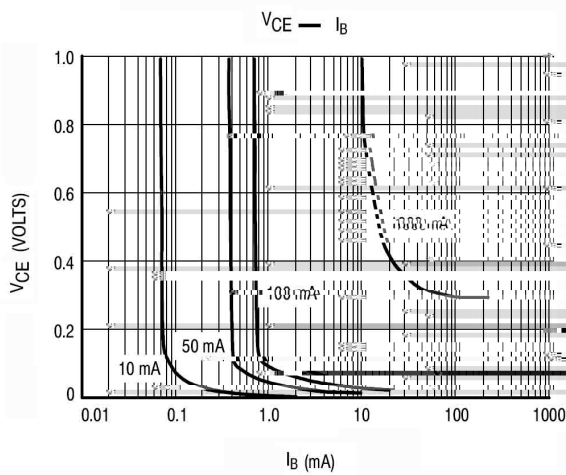
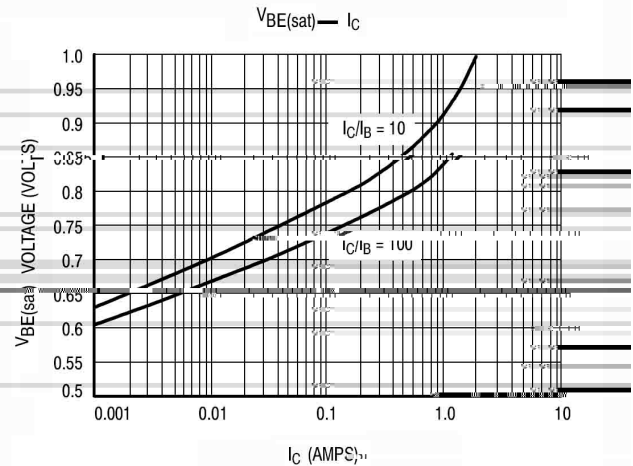
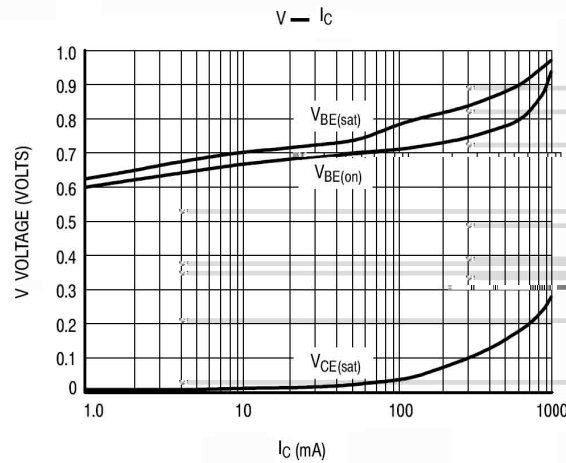
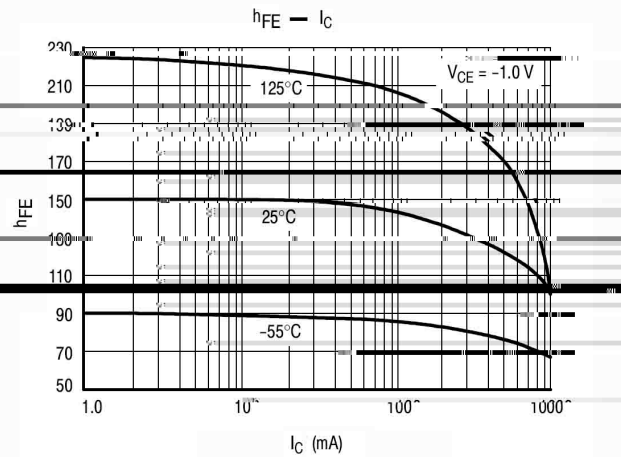
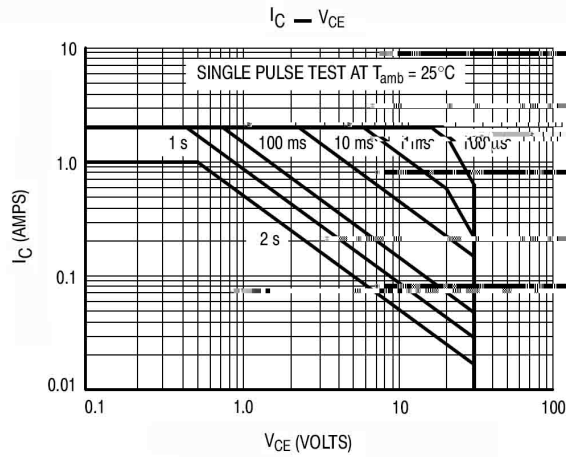
h_{FE} Range	100 300
Marking	HG3

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-50	V
Collector to Emitter Voltage	V_{CEO}	-30	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current	I_C	-1.0	A
Collector Current – Peak	I_{CM}	-2.0	A
Collector Power Dissipation	P_D	310	mW
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C = -0.1mA$ $I_E = 0$	-50			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C = -10mA$ $I_B = 0$	-30			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E = -0.1mA$ $I_C = 0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -30V$ $I_E = 0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4.0V$ $I_E = 0$			-0.1	μA
Collector–Emitter Cutoff Current	I_{CES}	$V_{CES} = -30V$ $I_E = 0$			-0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -2.0V$ $I_C = -500mA$	100		300	
	$h_{FE(2)}$	$V_{CE} = -2.0V$ $I_C = -2.0A$	40			
	$h_{FE(3)}$	$V_{CE} = -2.0V$ $I_C = -1.0A$	80			

h

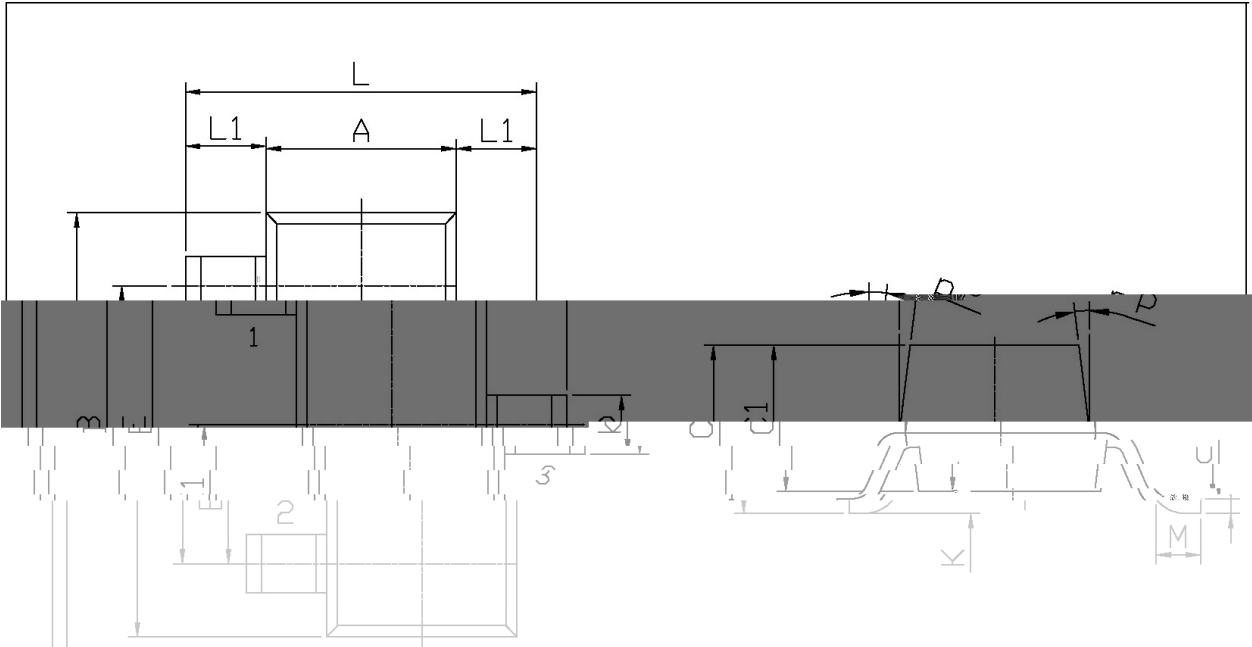
/ Electrical Characteristic Curve



/ Package Dimensions

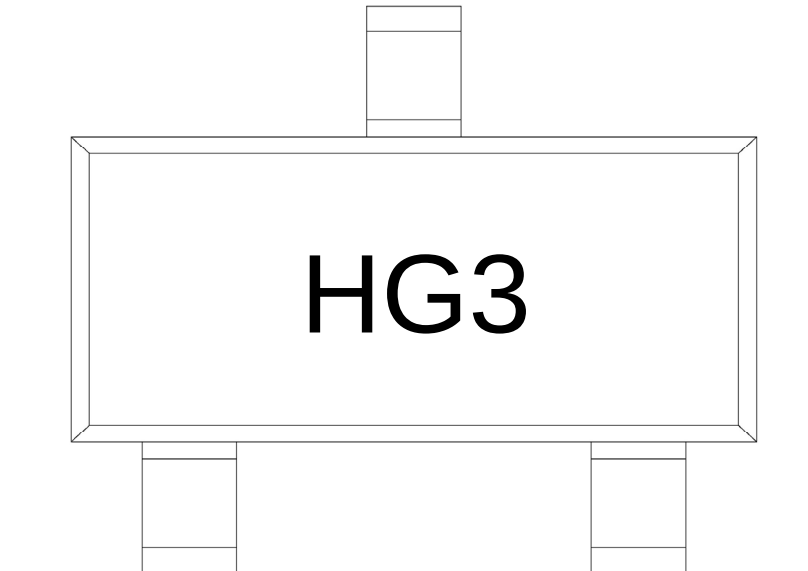
SOT-23

单位：mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min.	Max.	Symbol	Min.	Max.
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	φ	7°	
b	0.35	0.55			

/ Marking Instructions



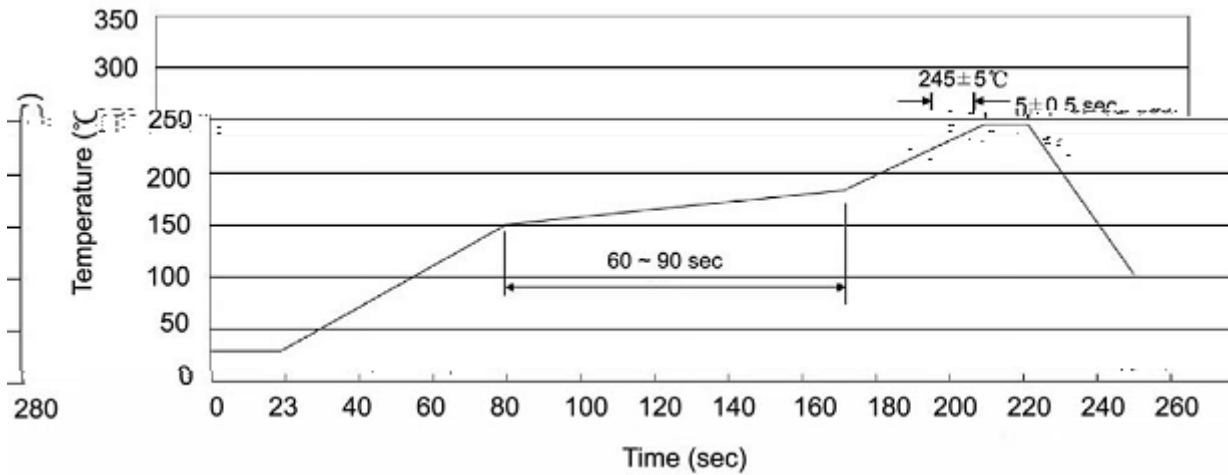
H

G3

Note:

H Company Code

G3 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)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱

/ Notices