

/ Descriptions

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

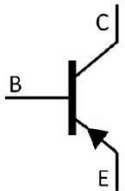
/ Features

, , , MMBTA42G
High voltage, low saturation voltage, low collector output capacitance, complementary pair with MMBTA42G.HF Product.

/ Applications

High voltage control circuit.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Range	>40
Marking	G2D

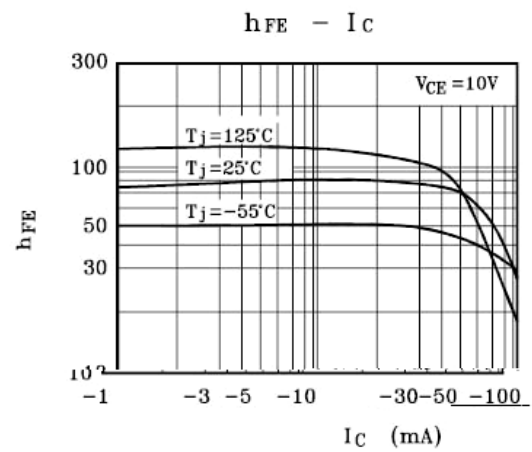
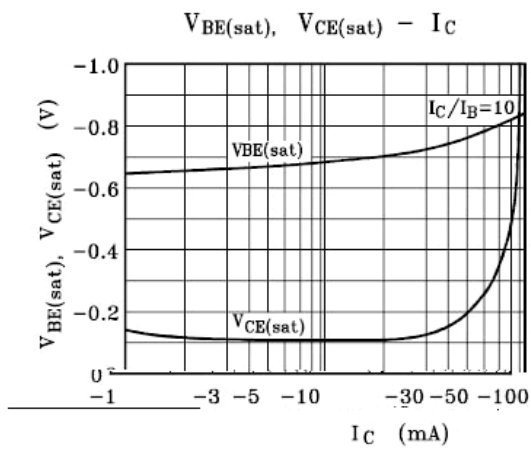
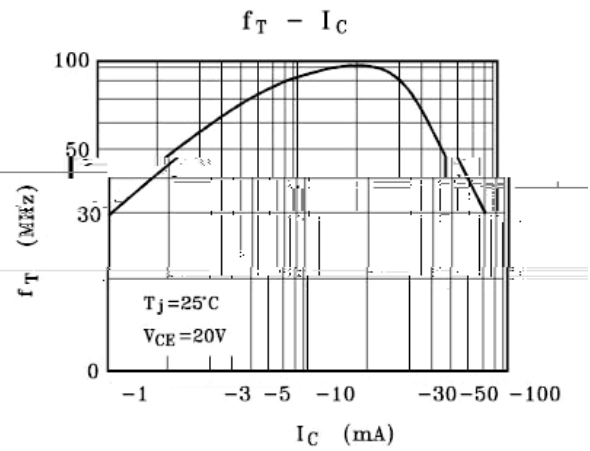
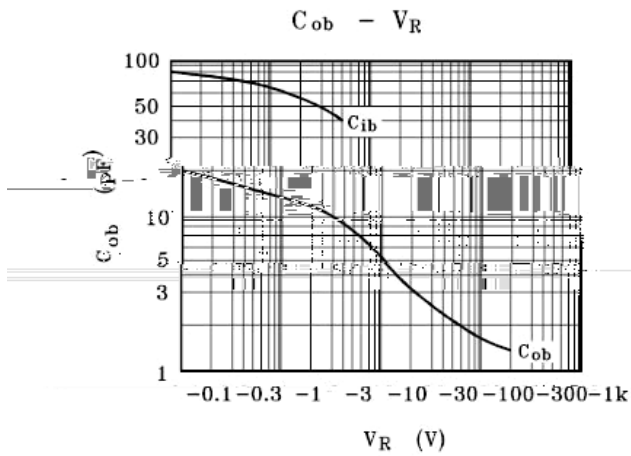
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-300	V
Collector to Emitter Voltage	V_{CEO}	-300	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current	I_C	-500	mA
Collector Power Dissipation	P_C	350	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}	$I_C=-100mA$ $I_E=0$	-300			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$ $I_B=0$	-300			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-100 A$ $I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-200V$ $I_E=0$			-0.25	A
Emitter Cut-off Current	I_{EBO}	$V_{BE}=-3.0V$ $I_C=0$			-0.1	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-10V$ $I_C=-10mA$	40			
	$h_{FE(2)}$	$V_{CE}=-10V$ $I_C=-30mA$	25			
	$h_{FE(3)}$	$V_{CE}=-10V$ $I_C=-1.0mA$	25			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-20mA$ $I_B=-2.0mA$			-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-20mA$ $I_B=-2.0mA$			-0.9	V
Transition Frequency	f_T	$V_{CE}=-20V$ $f=100MHz$ $I_C=-10mA$	50			MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-20V$ $f=1.0MHz$ $I_E=0$			6.0	pF

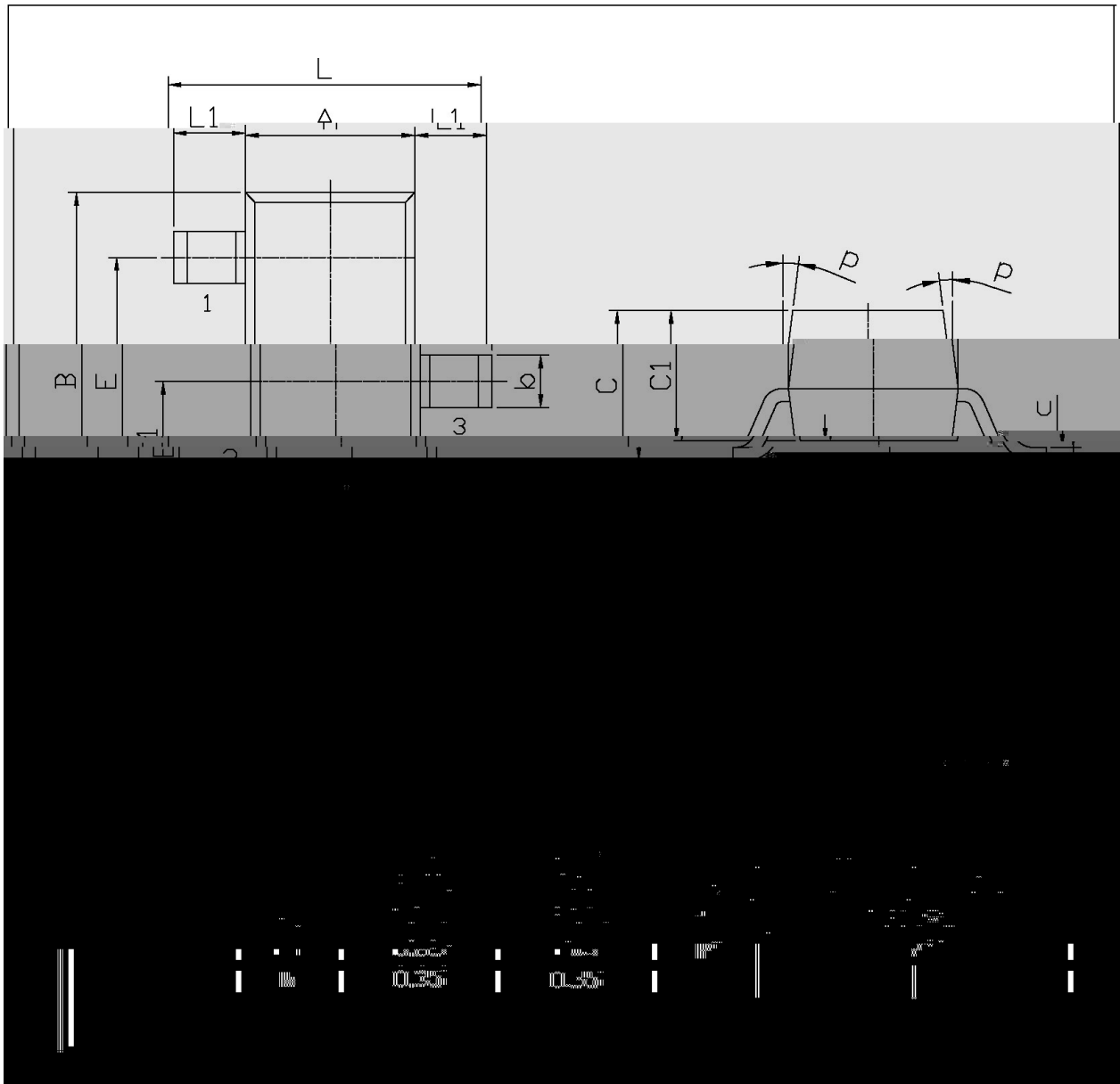
/ Electrical Characteristic Curve



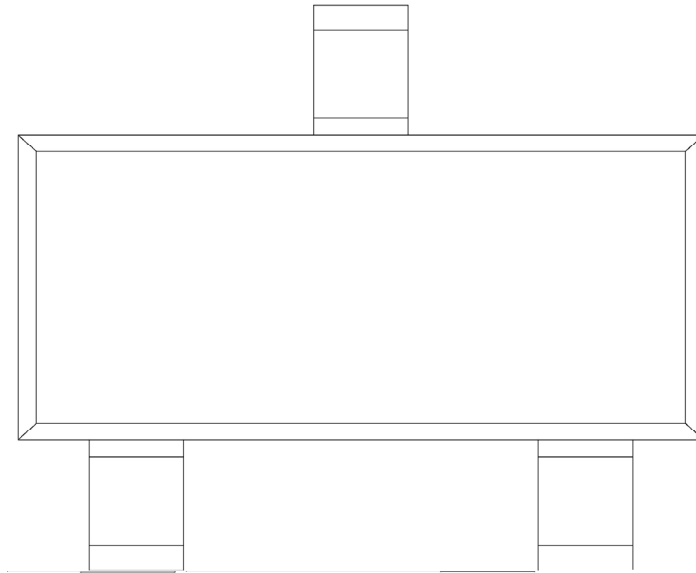
/ Package Dimensions

SOT-23

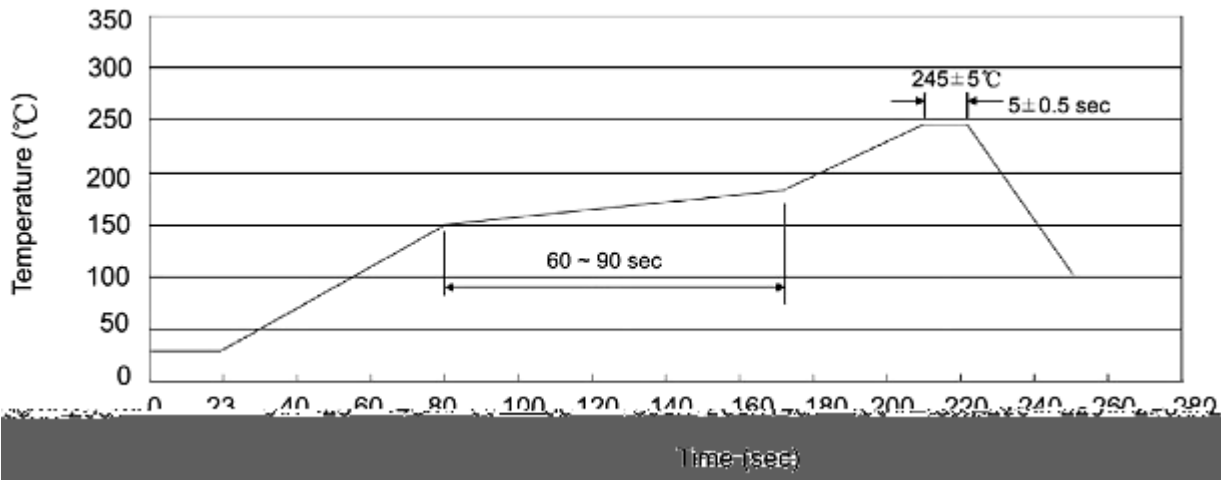
单位; mm



/ Marking Instructions



() / 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