MMBTA13

Rev.F Apr.-2017

蓝箭电子
BLUE ROCKET ELECTRONICS
DATA SHEET

ˇYت / Descriptions

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

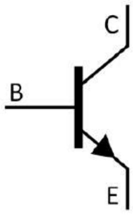
• È / Features

High current gain.

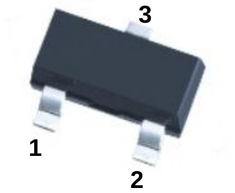
٧ ي / Applications

Applications requiring extremely high current gain device designed.

Ŋق ặ ؛ ع / Equivalent Circuit



ẫ ﾉ ữ / Pinning



PIN1 Base	PIN 2 Emitter	PIN 3 Collector

ŧ ʜ ڔ / Marking

h_{FE} Range	>10000
Marking	H1M

ώ ǟ ᴟ Ặ / Absolute Maximum Ratings(Ta=25 ɹ)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	10	V
Collector Current - Continuous	I_C	300	mA
Collector Power Dissipation	P_C	225	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

ꞩ ʎ ᴟ Ặ / Electrical Characteristics(Ta=25 ɹ)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=100μA I_E=0	30			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=500μA I_B=0	30			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=100μA I_C=0	10			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=30 V I_E=0			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=10V I_C=0			0.1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5.0V I_C=10mA	5000			
	$h_{FE(2)}$	V_{CE}=5.0V I_C=100mA	10000			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=100mA I_B=0.1mA			1.5	V
Base-Emitter On Voltage	V_{BE}	I_C=100mA V_{CE}=5.0V			2.0	V
Transition Frequency	f_T	I_C=10mA V_{CE}=5.0V f=100MHz	125			MHz

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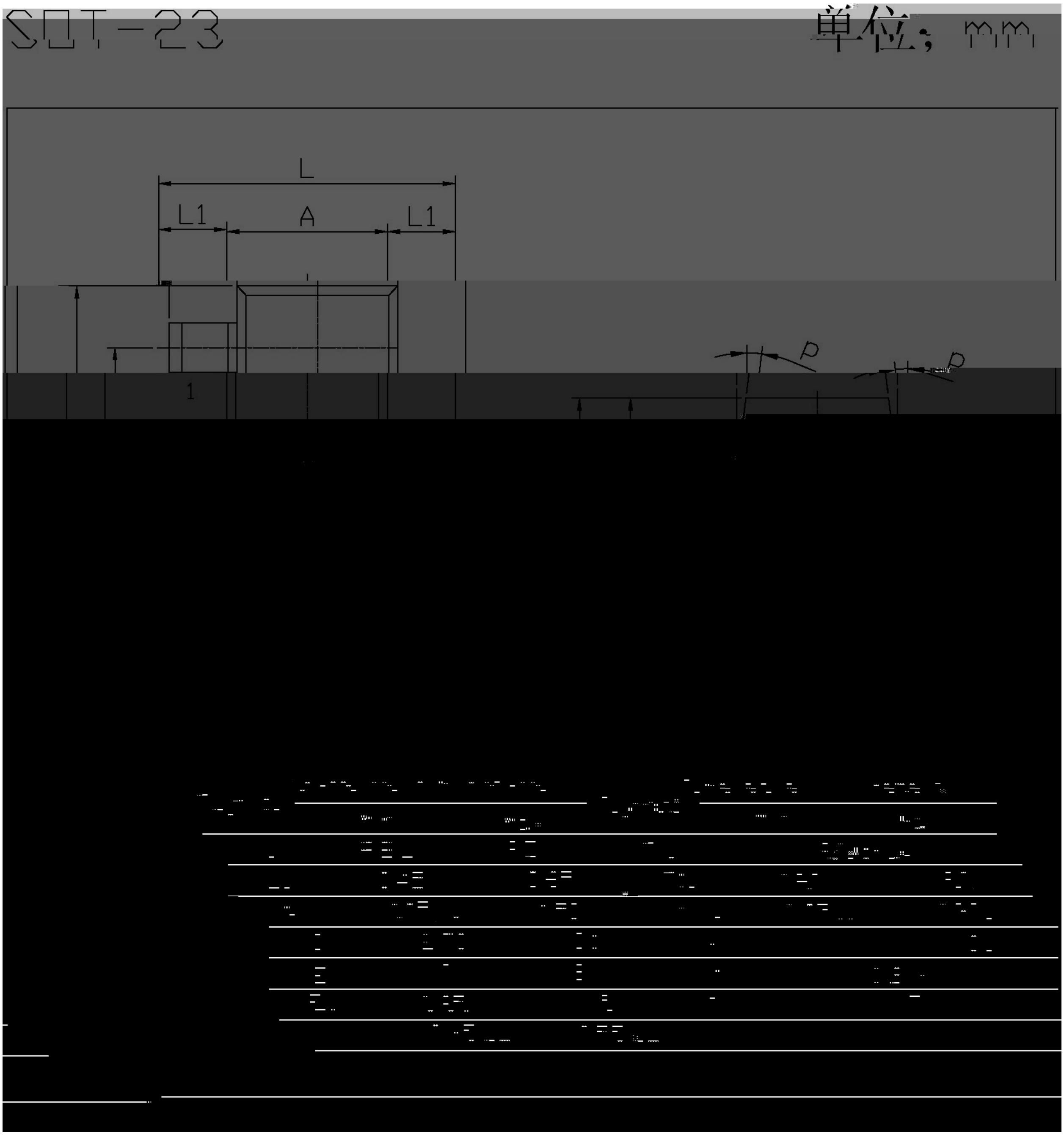
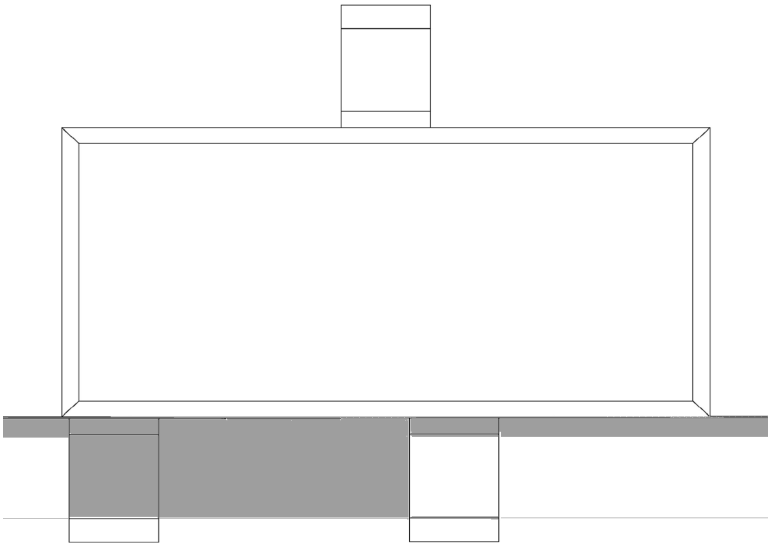


ŧ˛ ʟ˝Ω / Marking Instructions



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Note:

H: Company Code.

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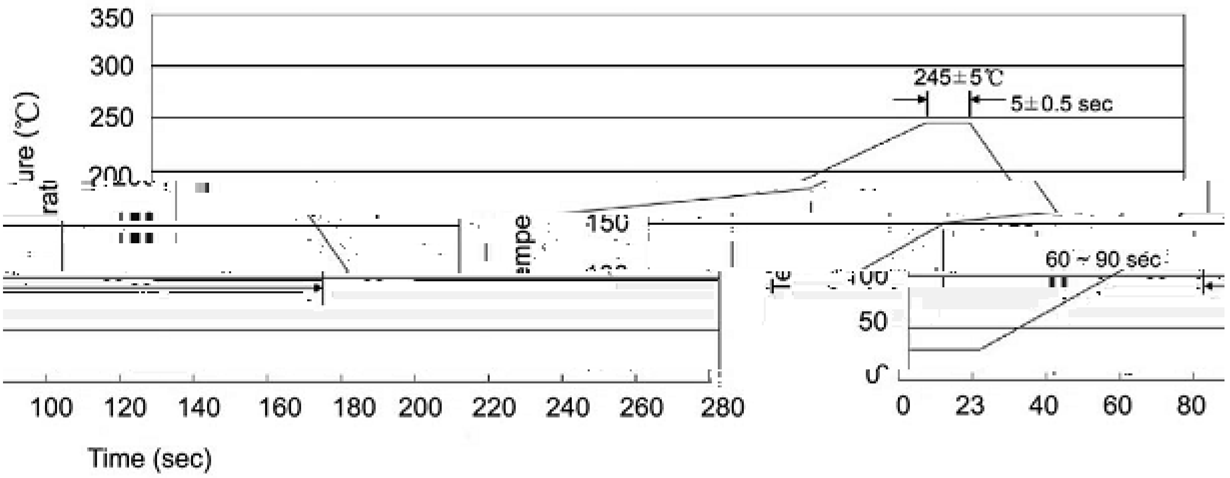

Note:

1 25 150 60 90sec;
2 245±5 5±0.5sec;
3 2 10 /sec.

1.Preheating:25~150 , Time:60~90sec.
2.Peak Temp.:245±5 , Duration:5±0.5sec.
3. Cooling Speed: 2~10 /sec.

ⅎ ü զ ⁼̄ `Y Ţ / Resistance to Soldering Heat Test Conditions

260±5 10±1 sec.

Temp.:260±5 Time:10±1 sec

ɒ ㄷ ≮— / Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm^3)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ρ ×8	180×120×180	390×385×205

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