

/ Descriptions

SOT-23

PNP

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

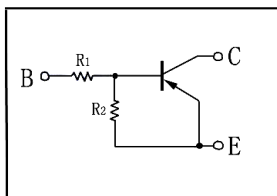
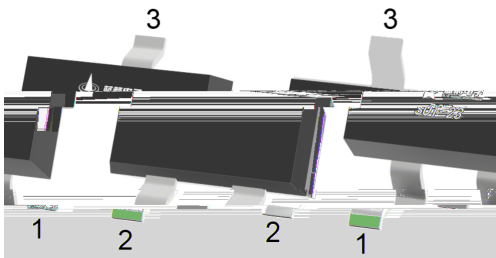
/ Features

AEC-Q101

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, high current, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

Switching, inverter circuit, interface circuit and driver circuit applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit**/ Pinning**

PIN 1 Base

PIN 2 Emitter

PIN 3 Collector

/ h_{FE} Classifications & Marking

Marking

Q13

/ Absolute Maximum Ratings(Ta=25)

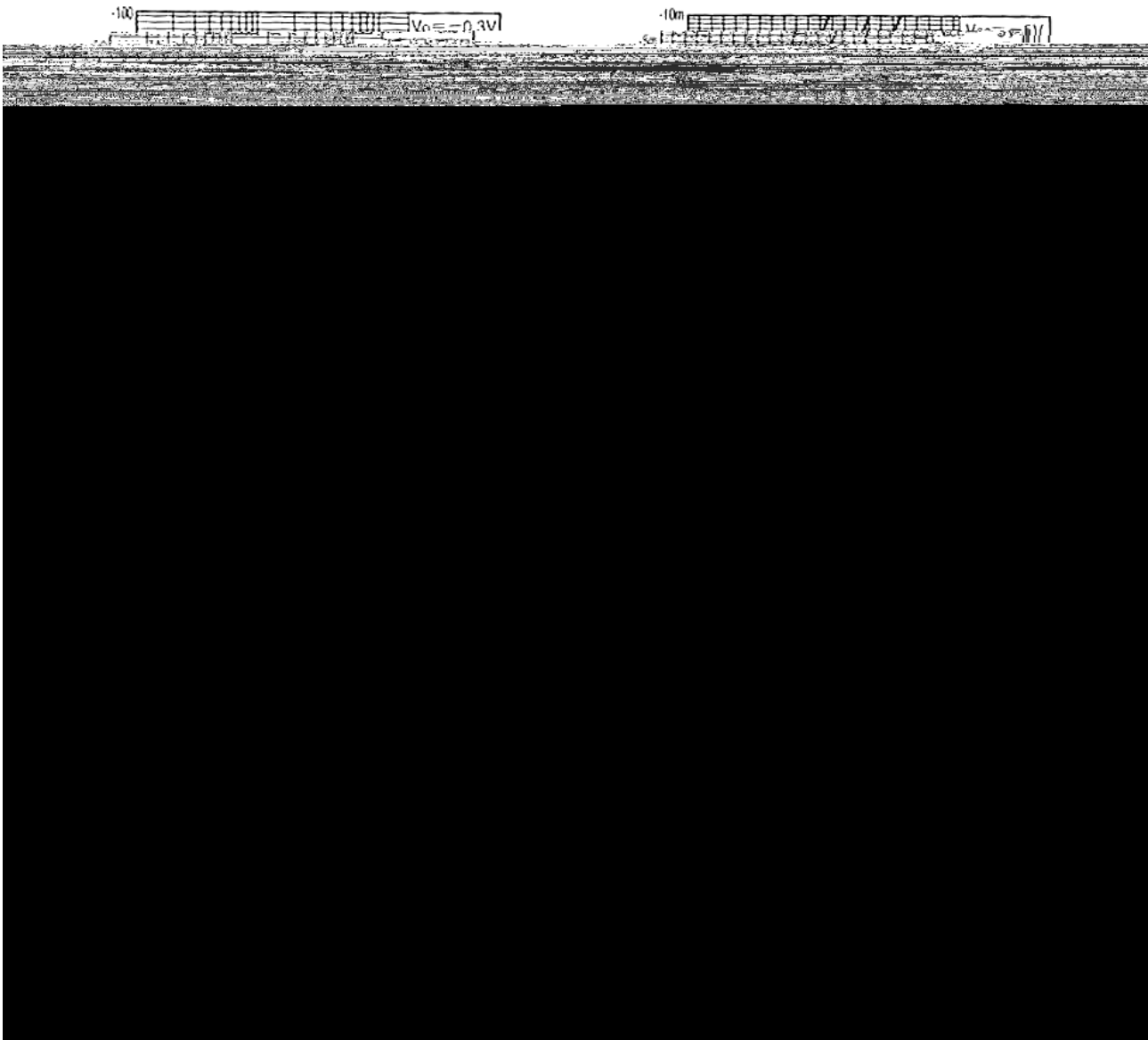
Parameter	Symbol	Rating	Unit
Output Voltage	V _{CC}	-50	V
Input Voltage	V _{IN}	-30	V
		10	V
Output Current	I _O	-100	mA
	I _{C(MAX)}	-100	mA
Power Dissipation	P _d	200	mW
Junction Temperature	T _j	150	
Storage Temperature Range	T _{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	V _{I(off)}	V _{CC} =-5.0V I _O =-100μA			-0.5	V
	V _{I(on)}	V _O =-0.3V I _O =-20mA	-3.0			V
Output Voltage	V _{O(on)}	I _O =-10mA I _I =-0.5mA		-0.1	-0.3	V
Input Current	I _I	V _I =-5.0V			-1.8	mA
Output Cut-off Current	I _{O(off)}	V _{CC} =-50V V _I =0V			-0.5	μA
DC Current Gain	G _I	V _O =-5.0V I _O =-10mA	20			
Transition Frequency	f _T	V _{CE} =-10V I _E =5.0mA f=100MHz		250		MHz
Resistance1	R ₁		3.29	4.7	6.11	KΩ
Resistance Ratio	R ₂ /R ₁		0.8	1.0	1.2	



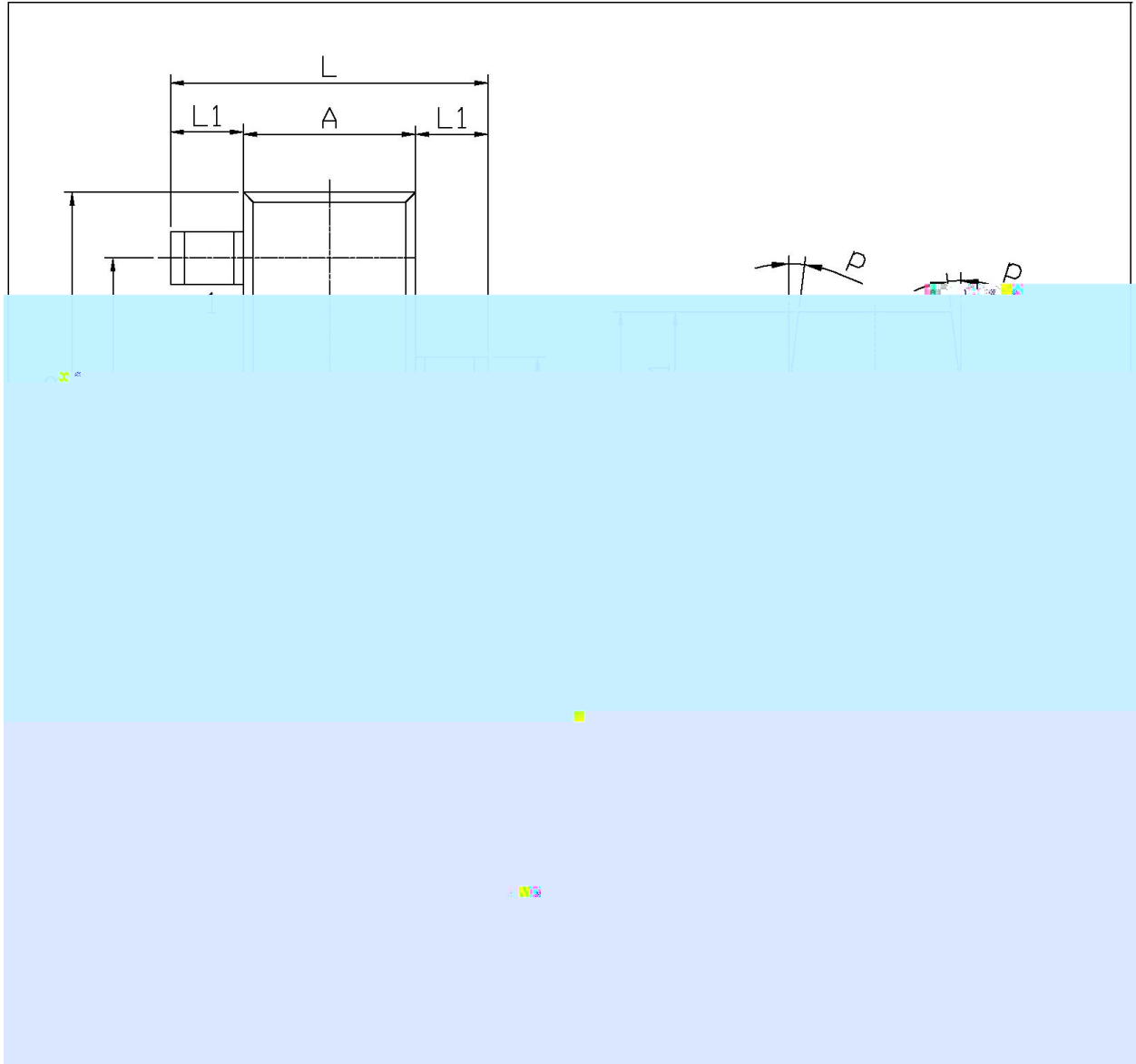
/ Electrical Characteristic Curve



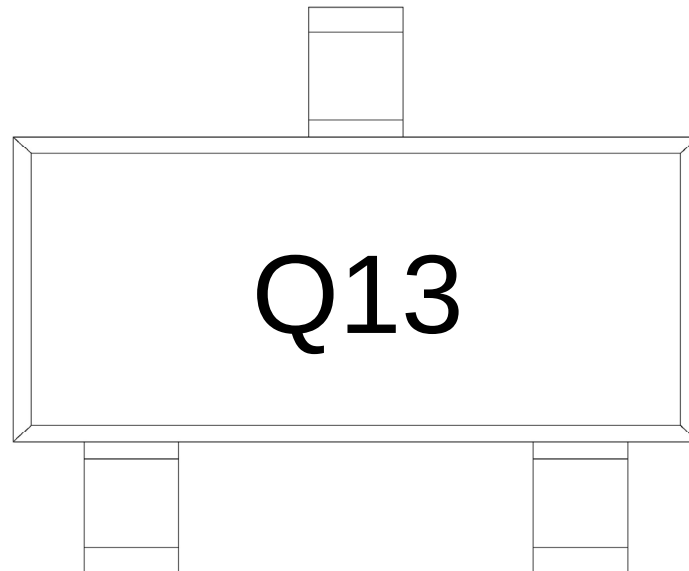
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



Q

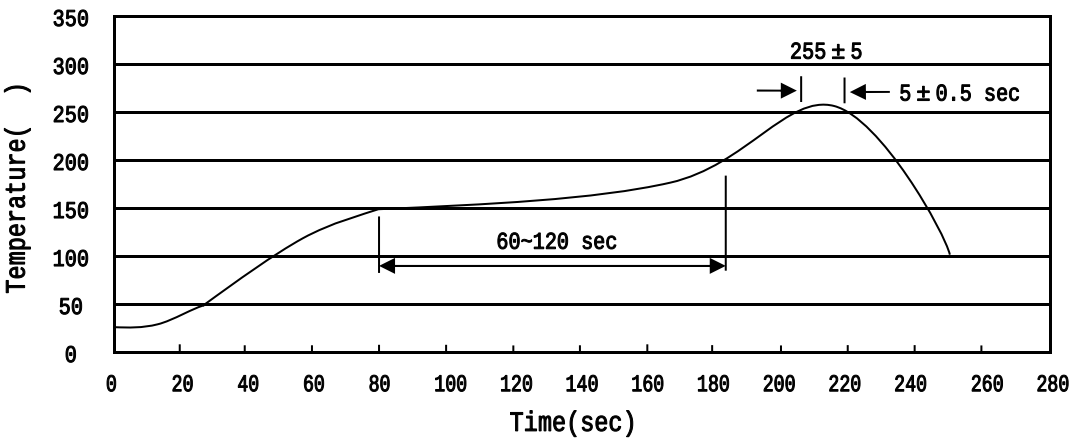
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Note:

Q: Automobile halogen-free product Code

13 Product Type Code

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255±5

5±0.5sec;

2.Peak Temp.:255±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: mm³)		
	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