

/ Descriptions

SOT-23

PNP

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

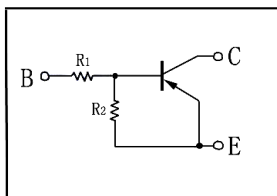
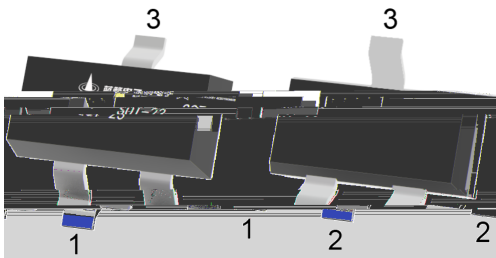
/ Features

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
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/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

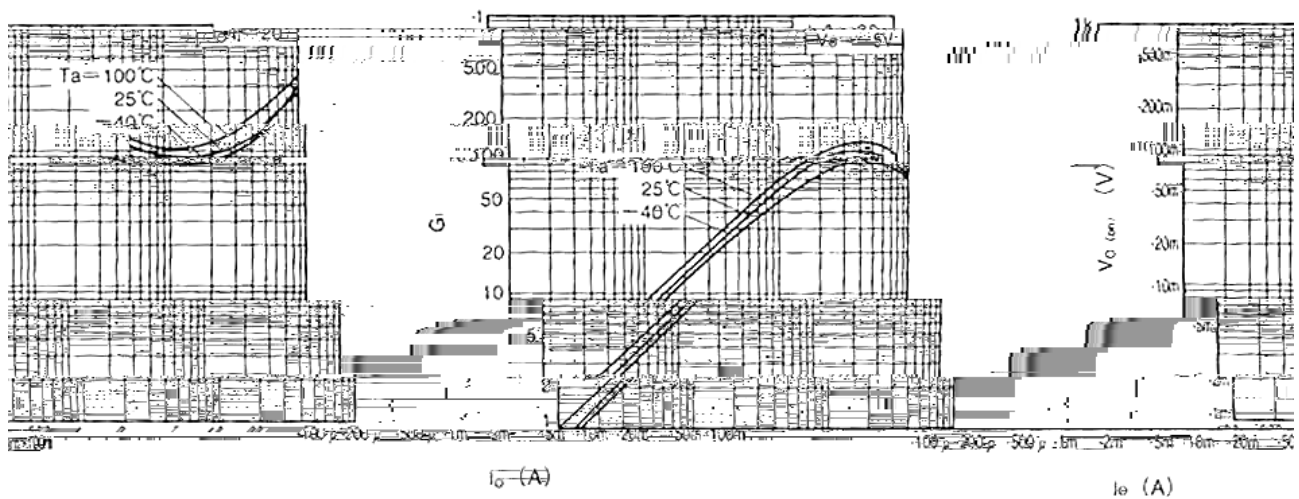
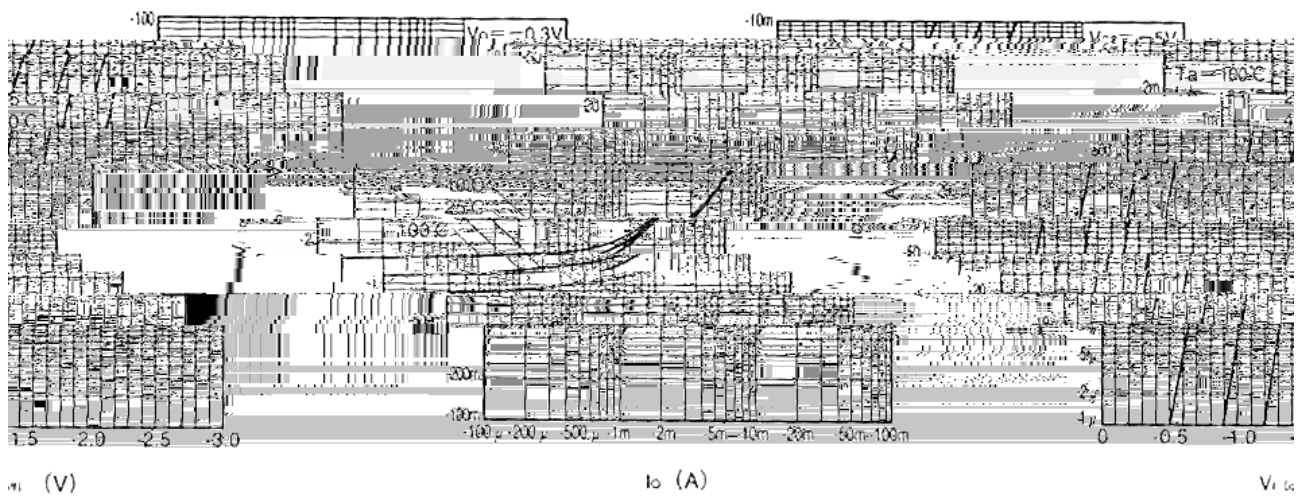
Parameter	Symbol	Rating	Unit
Output Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-30	V
		10	V
Output Current	I_O	-100	mA
	$I_{C(MAX)}$	-100	mA
Power Dissipation	P_d	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	$V_{I(off)}$	$V_{CC}=-5.0V$ $I_O=-100\mu A$			-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	K Ω
Resistance Ratio	R_2/R_1		0.8	1.0	1.2	



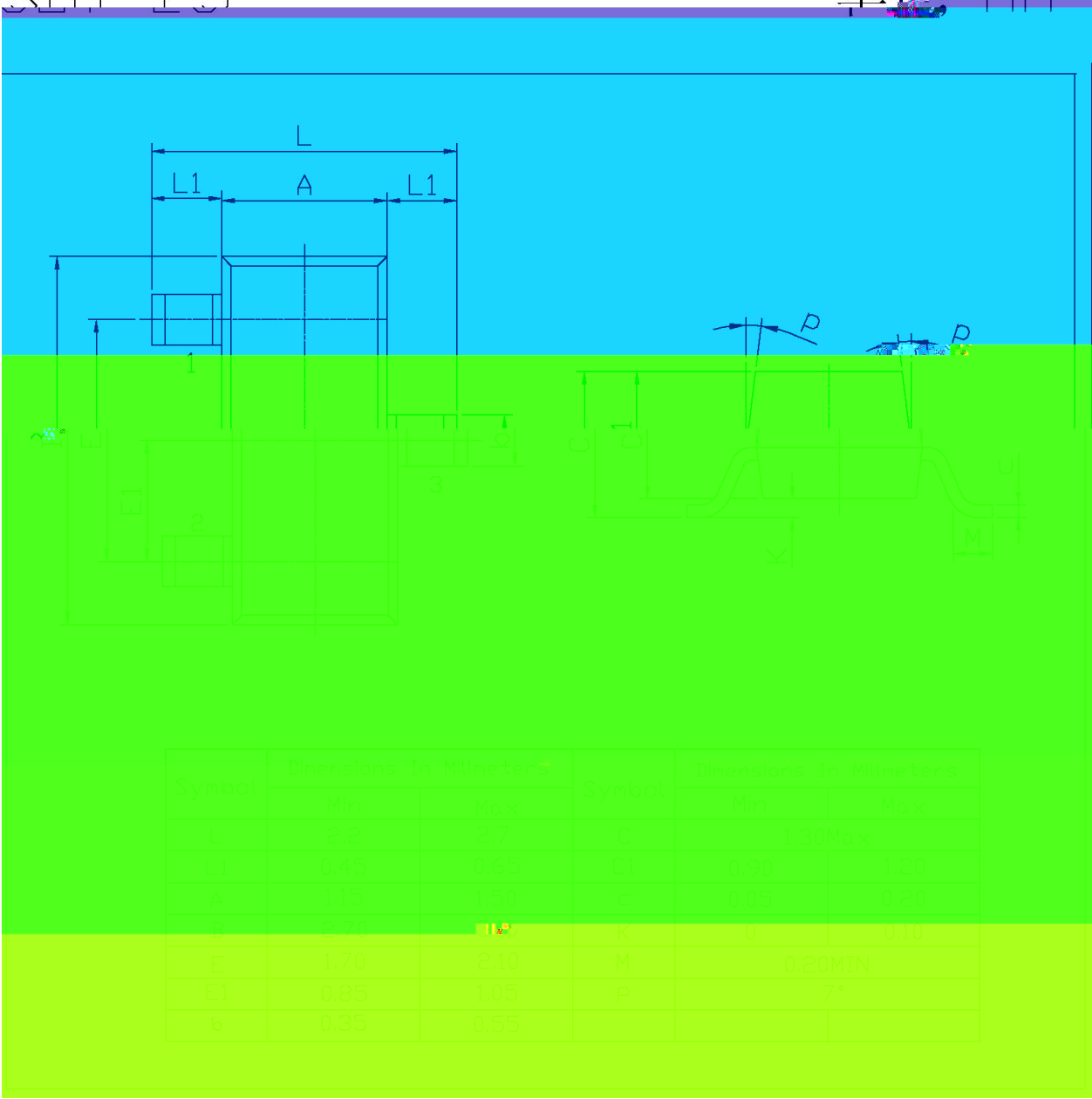
/ Electrical Characteristic Curve



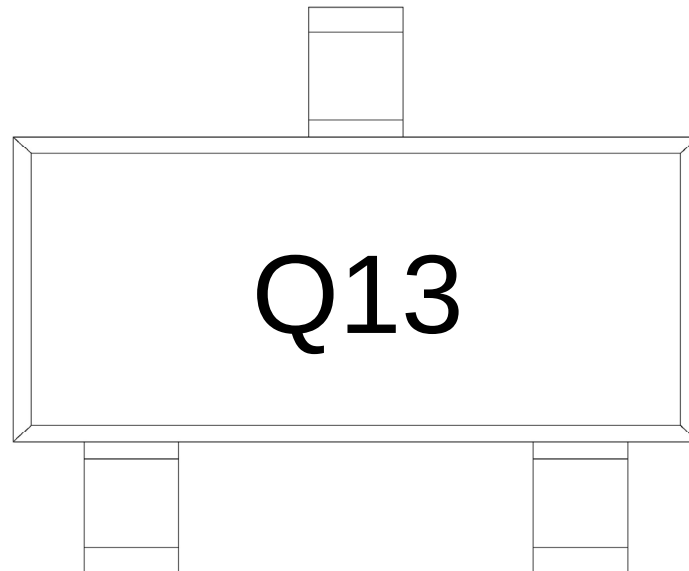
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



Q

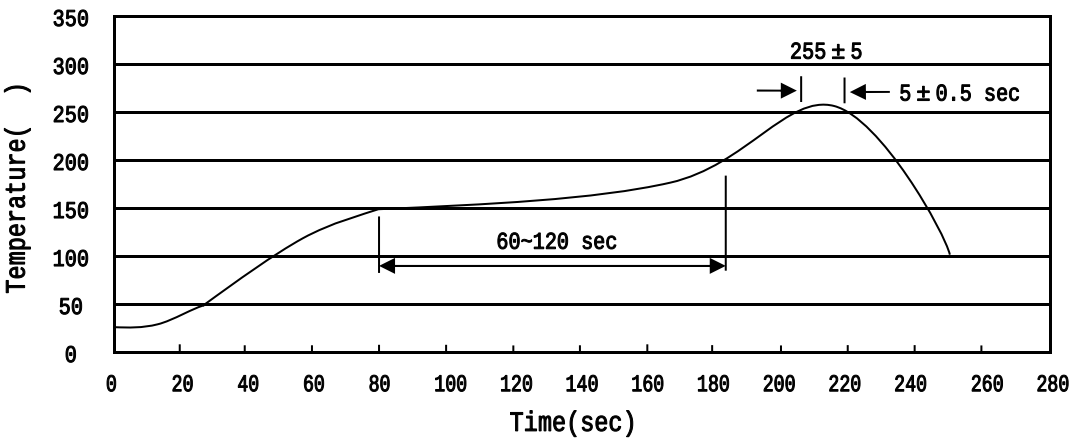
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Note:

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)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices