

5 é / Descriptions

9 5 : .> // x J´ 6 4 6 f â´ož Silicon PNP Digital transistor in a SOT-23 Plastic Package.

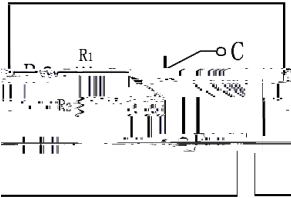
¤ª / Features

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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.

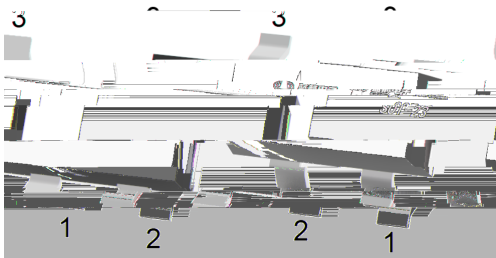
Đ ÷ / Applications

9 •¼o• F, èo• µ è Y C Ü è k á V ñ• } Lož  
Switching, inverter circuit, interface circuit and driver circuit applications, Meet the stringent requirements of automotive applications.

Ã W ] Ô • / Equivalent Circuit



•Û - æ / Pinning



PIN 1 y Base      PIN 2 y Emitter      PIN 3 y Collector

Z Ü B , M V / h<sub>FE</sub> Classifications & Marking

Marking	Q13
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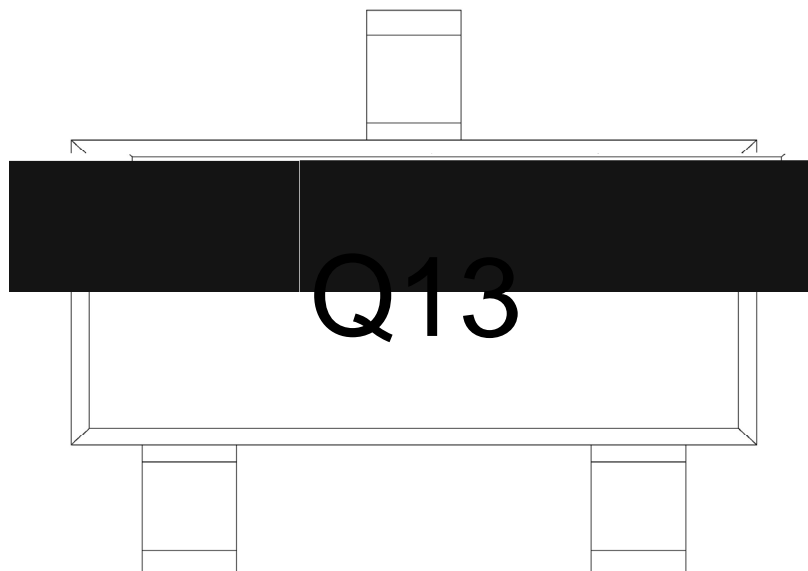
@ f Parameter	... Z Symbol	f › Rating	% y Unit
Output Voltage	V <sub>CC</sub>	-50	V
Input Voltage	V <sub>IN</sub>	-30	V
		10	V
Output Current	I <sub>O</sub>	-100	mA
	I <sub>C(MAX)</sub>	-100	mA
Power Dissipation	P <sub>d</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	
Storage Temperature Range	T <sub>stg</sub>	-55 150	

@ f Parameter	... Z Symbol	y j Ú ^ Test Conditions	Â 4 › Min	Á ° › Typ	Â Ý › Max	% y Unit
Input Voltage	V <sub>I(off)</sub>	v <sub>CC</sub> =-5.0V I <sub>O</sub> =-100 A			-0.5	V
	V <sub>I(on)</sub>	V <sub>O</sub> =-0.3V I <sub>O</sub> =-20mA	-3.0			V
Output Voltage	V <sub>O(on)</sub>	I <sub>O</sub> =-10mA I <sub>I</sub> =-0.5mA		-0.1	-0.3	V
Input Current	I <sub>I</sub>	V <sub>I</sub> =-5.0V			-1.8	mA
Output Cut-off Current	I <sub>O(off)</sub>	V <sub>CC</sub> =-50V V <sub>I</sub> =0V			-0.5	A
DC Current Gain	G <sub>I</sub>	V <sub>O</sub> =-5.0V I <sub>O</sub> =-10mA	20			
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =-10V I <sub>E</sub>				

Ó ? d • Ž ¢ / Electrical Characteristic Curve







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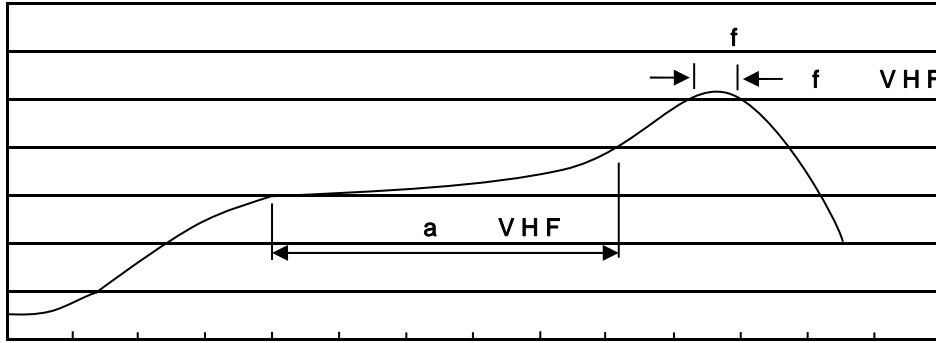
Note:

Q: Automobile halogen-free product Code

13 y Product Type Code

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7HP SHUDWXUH



**7LPH VHF**

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Note:

- 1. Preheating: 150~200 - , Time: 60~120sec.
- 2. Peak Temp.: 255 r5 - , Duration: 5 r0.5sec.
- 3. Cooling Speed: 2~10 - /sec.

**Resistance to Soldering Heat Test Conditions**

Temp.: 260±5      Time: 10±1 sec

**Packaging SPEC.**

REEL

Package Type	Units ;>û !H					Dimension ;>û p . (unit /mm <sup>3</sup> )		
	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 s x8	180x120x180	390x385x205

**Notices**