

5 é / Descriptions

9 5 : .> // x J´ 4 6 4 f â'ož Silicon NPN 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, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

Đ ÷ / Applications

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

Ã W] Ô • / Equivalent Circuit

• Ô - æ / Pinning

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

Z Ü B , M V / h_{FE} Classifications & Marking

Marking	QE23
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@ f Parameter	... Z Symbol	f > Rating	% y Unit
Output Voltage	V _{CC}	50	V
Input Voltage	V _{IN}	30	V
		-5.0	V
Output Current	I _O	100	mA
	I _C	100	mA
Power Dissipation	P _C	200	mW
Junction Temperature	T _J	150	
Storage Temperature Range	T _{stg}	-55 150	

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Input Voltage(OFF)	V _{I(off)}	V _{CC} =5.0V I _O =100 A			0.5	V
Input Voltage(ON)	V _{I(on)}	V _O =0.3V I _O =5.0mA	1.3			V
Output Voltage	V _{O(on)}	I _O =5.0mA I _I =0.25mA		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	A
DC Current Gain	G _I	V _O =5.0V I _O =10mA	80			
Transition Frequency	f _T	V _{CE} =10V f=100MHz I _E =-5.0mA		250		MHz
Resistance1	R ₁		3.29	4.7	6.11	K
Resistance Ratio	R ₂ /R ₁		8.0	10	12	

Ø □ =) ¢ / Package Dimensions

QE23

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7 y V ñ —) í D } ö œ

E23 y ° Z W A

Note:

Q: Automobile halogen-free product Code

E23 y Product Type Code

šWD t...•Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

ª ¢ y

Note:

- 1o• Ä ½ “† 150 ½200 - k ž • 60 ½120sec; 1.Preheating:150~200 - , Time:60~120sec.
 2o• Q › “† 255 r5 - k ž • 4 Ò 5 r0.5sec; 2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.
 3o•D N ò i Ò 0 ,† 2 ½10 - /sec. 3.Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“† y 260 r5 - ž • y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û !H	Dimension ;>û p .	(unit Åmm³) 3
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