

DTC143ZKA

Rev.H Jun.-2025

/ Descriptions

SOT-23

NPN

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

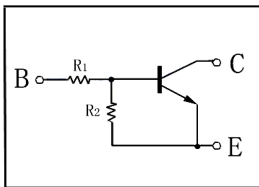
/ Features

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, HF Product.

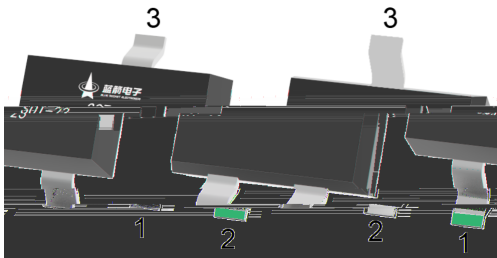
/ Applications

Switching, inverter circuit, interface circuit and driver circuit applications.

/ Equivalent Circuit



/ Pinning



PIN 1 Base

PIN 2 Emitter

PIN 3 Collector

/ hFE Classifications & Marking

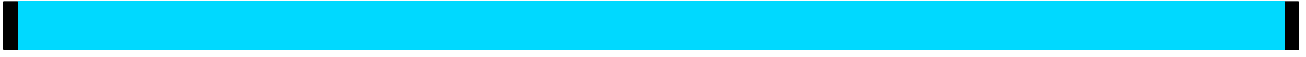
Marking	HE23
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/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Output Voltage	V _{CC}	50	V
Input Voltage	V _{IN}	30	V
		-5.0	V
Output Current	I _O	100	mA
Power Dissipation	P _C	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 150	°C

/ Electrical Characteristics(Ta=25)

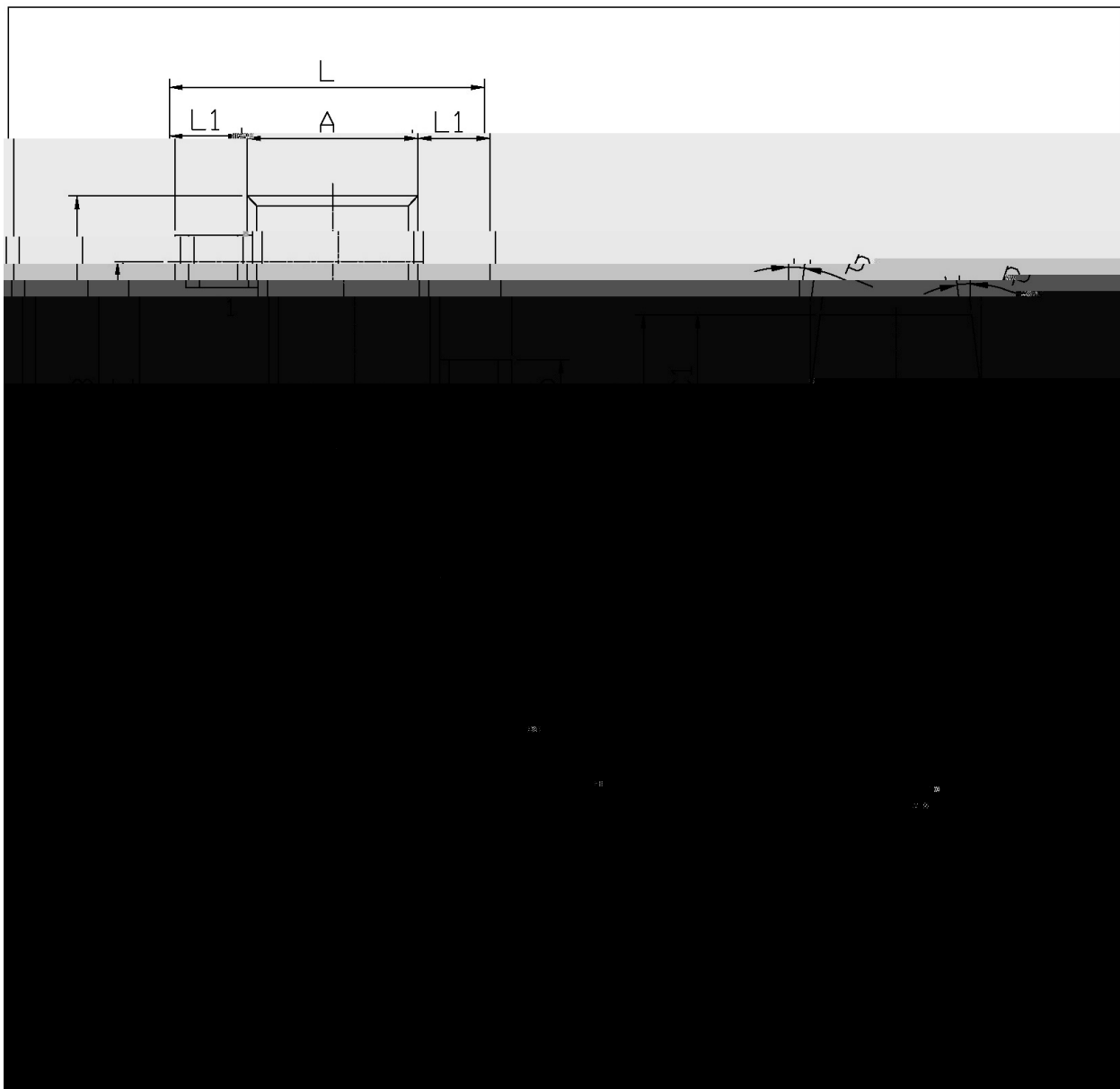
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage(OFF)	V _{I(off)}	V _{CC} =5.0V I _O =100μA	0.5			V
Input Voltage(ON)	V _{I(on)}	V _O =0.3V I _O =5.0mA			1.3	V
Output Voltage	V _{O(on)}	I _O =5.0mA I _I =0.25mA		0.1	0.3	V
Input Current	I _I	V _I =5.0V			1.8	mA
Output Cut-off Current	I _{O(off)}	V _{CC} =50V V _I =0V			0.5	μA
DC Current Gain	G _I	V _O =5.0V I _O =10mA	80			
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
Resistance Ratio	R ₂ /R ₁		8.0	10	12	



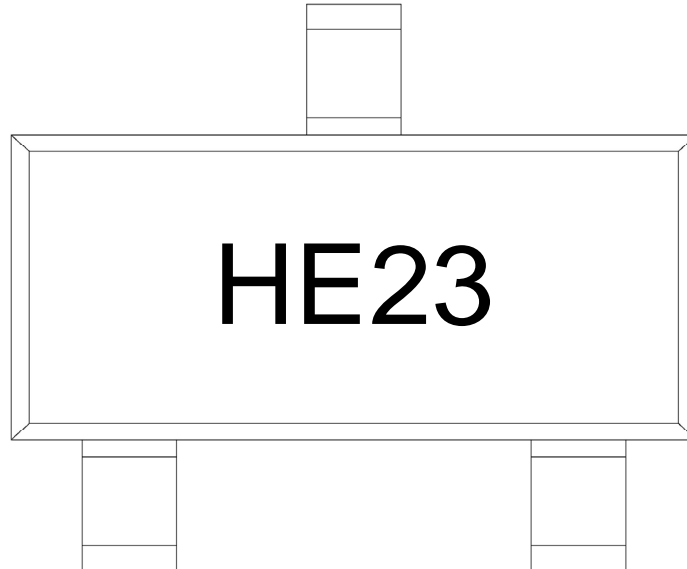
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



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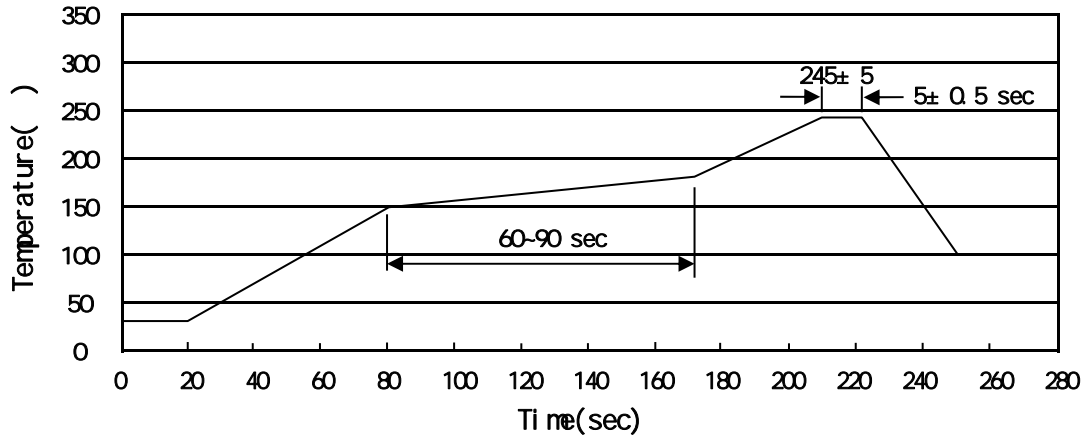
E23

Note:

H Company Code

E23 Product Type Code

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



Note:

- | | | | | | |
|---|-------|-----|----|-----------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | | | 5±0.5sec; | 2.Peak Temp.:245±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°C Time:10±1 sec

/ 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 x8	180x120x180	390x385x205

/ Notices