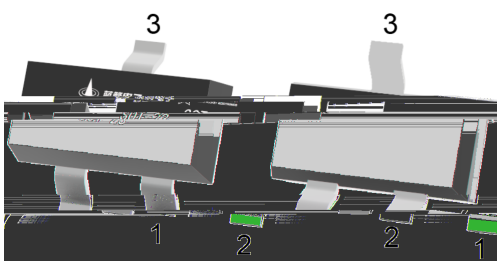
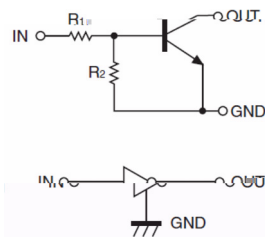


SOT-23 NPN Silicon NPN Digital transistor in a SOT-23 Plastic Package.

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Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit); The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input; They also have the advantage of almost completely eliminating parasitic effects; Only the on/off conditions need to be set for operation, making device design easy, HF product.

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

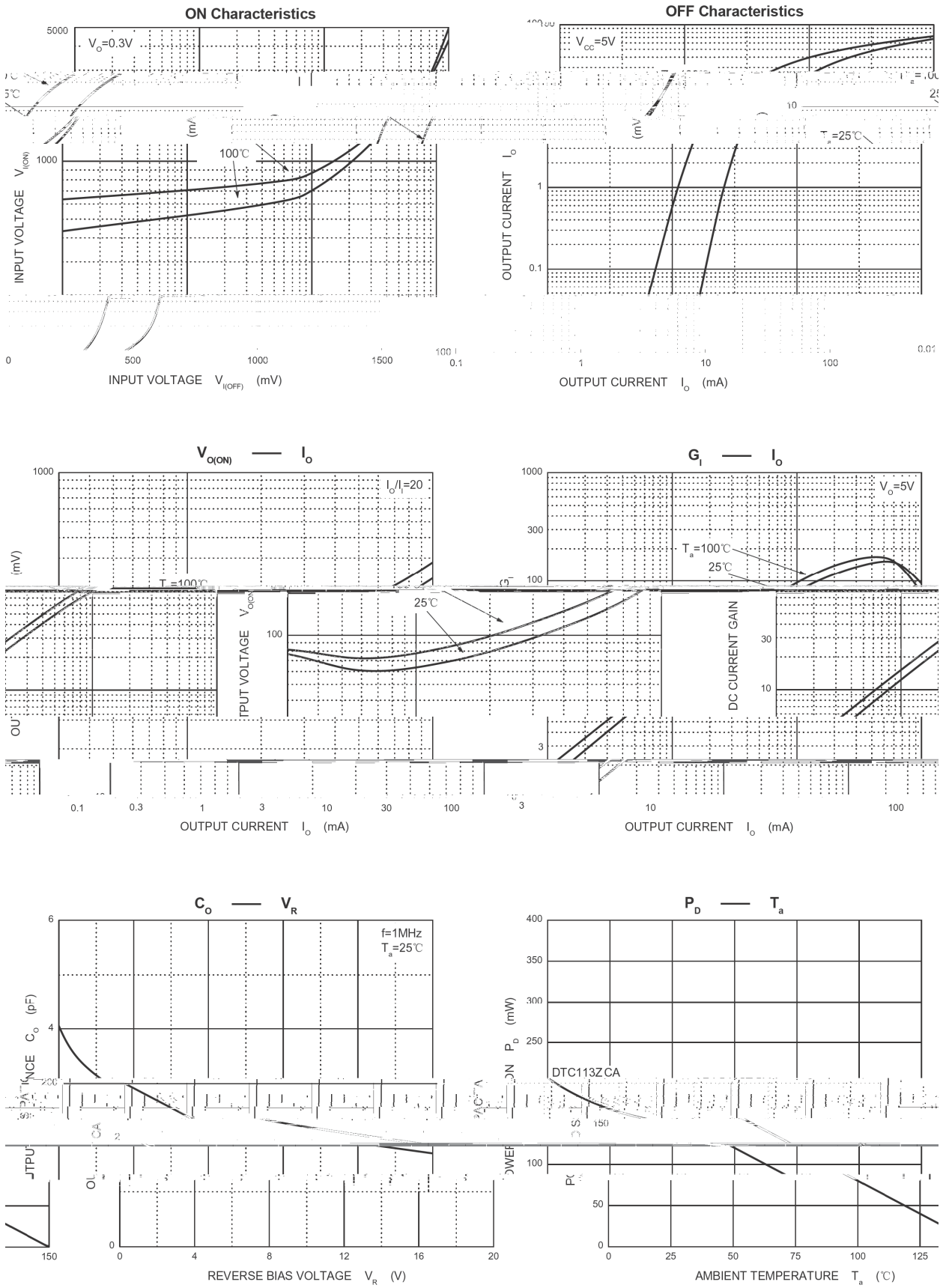


PIN 1 IN PIN 2 GND PIN 3 OUT

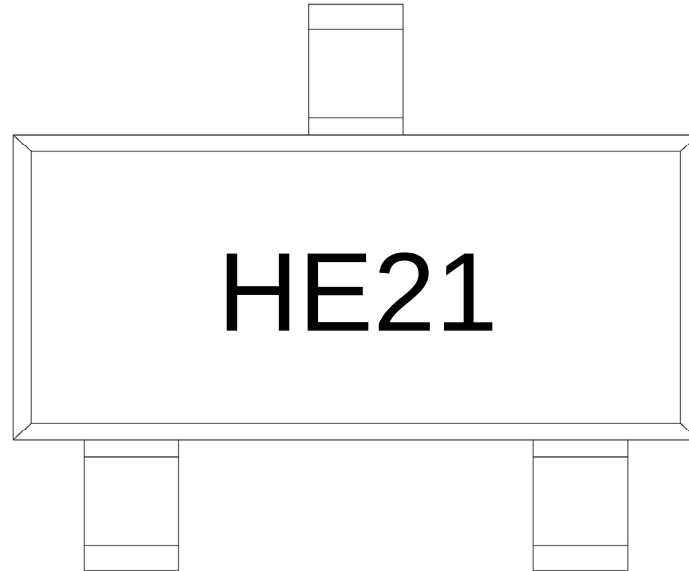
Marking	HE21
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Parameter	Symbol	Rating	Unit
Supply Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	-5~10	V
Output Current	I_O	100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	$V_{I(off)}$	$V_{CC}=5.0V$ $I_O=100\mu A$	0.3			V
Input Voltage	$V_{I(on)}$	$V_O=0.3V$ $I_O=10mA$			3	V
Output Voltage	$V_{O(on)}$	$I_O=10mA$ $I_I=0.5mA$			0.3	V
Input Current	I_I	$V_I=5.0V$			7.2	mA
Output Cut-off Current	$I_{O(off)}$	$V_{CC}=50V$ $V_I=0V$			0.5	μA
DC Current Gain	G_I	$V_O=5.0V$ $I_O=5.0mA$	33			
Resistance1	R_1		0.7	1	1.3	$K\Omega$
Resistance Ratio	R_2/R_1		8	10	12	
Transition Frequency	f_T	$V_O=10V$ $I_O=5.0mA$ $f=100MHz$		250		MHz



Rev.A May.-2024



H

E21

Note:

H Company Code

E21 Product Type Code

Temperature Profile for IR Reflow Soldering(Pb-Free)

- 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.

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL