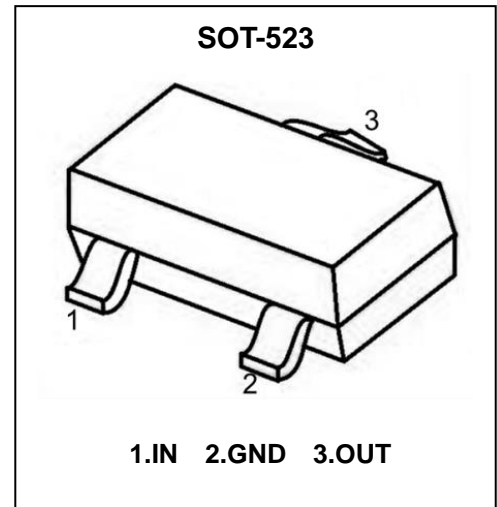
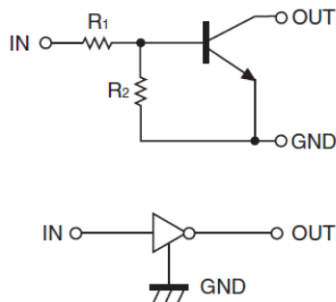


**DTC143EE Digital Transistor(NPN)**

**Feature**

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- The bias resistors consist of thin-film resistors with complete isolation to allow positive 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

**Schematic diagram**



**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

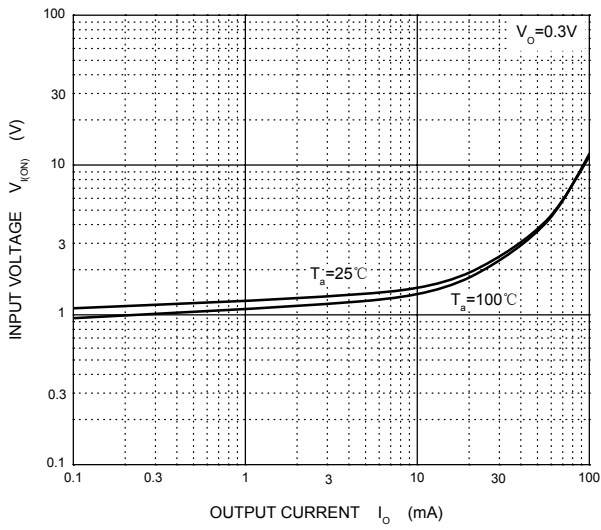
Parameter	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	50	V
Input Voltage	V <sub>IN</sub>	-10~+30	V
Output Current	I <sub>O</sub>	100	mA
Power Dissipation	P <sub>D</sub>	150	mW
Junction Temperature	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>STG</sub>	-45 ~ +125	°C

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise noted)**

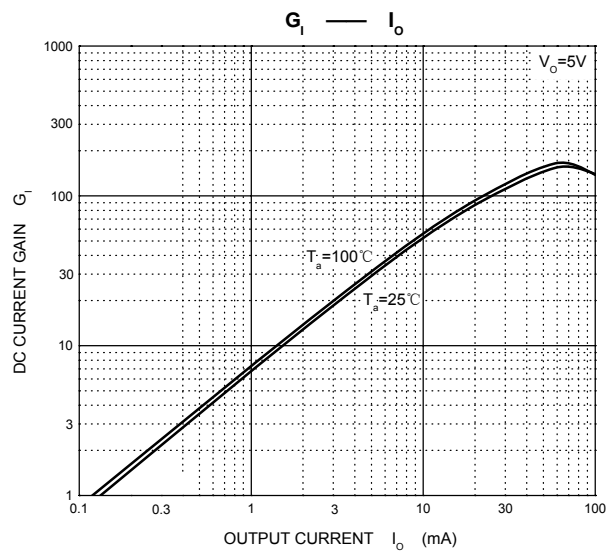
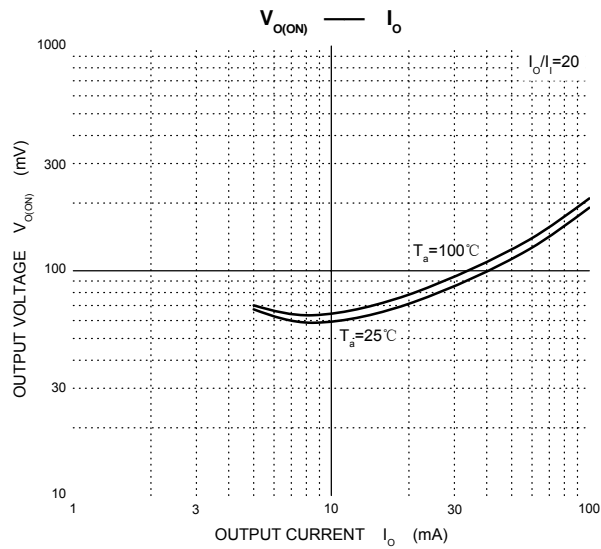
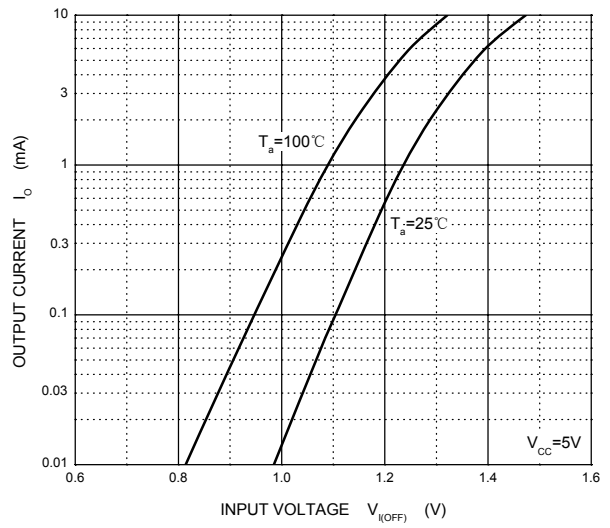
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Input voltage	V <sub>I(off)</sub>	V <sub>CC</sub> =5V , I <sub>O</sub> =100μA	0.5			V
	V <sub>I(on)</sub>	V <sub>O</sub> =0.3V , I <sub>O</sub> =20mA			3	V
Output voltage	V <sub>O(on)</sub>	I <sub>O</sub> =10mA , I <sub>I</sub> =0.5mA			0.3	V
Output current	I <sub>O(off)</sub>	V <sub>CC</sub> =50V , V <sub>I</sub> =0V			0.5	μA
DC current gain	G <sub>I</sub>	V <sub>O</sub> =5V , I <sub>O</sub> =10mA	20			
Input resistance	R <sub>1</sub>		3.29	4.7	6.11	kΩ
Resistance ratio	R <sub>2</sub> / R <sub>1</sub>		0.8	1	1.2	
Transition frequency	f <sub>T</sub>	V <sub>O</sub> =10V, I <sub>O</sub> =5mA, f=1MHz		250		MHz

**Typical Characteristics**

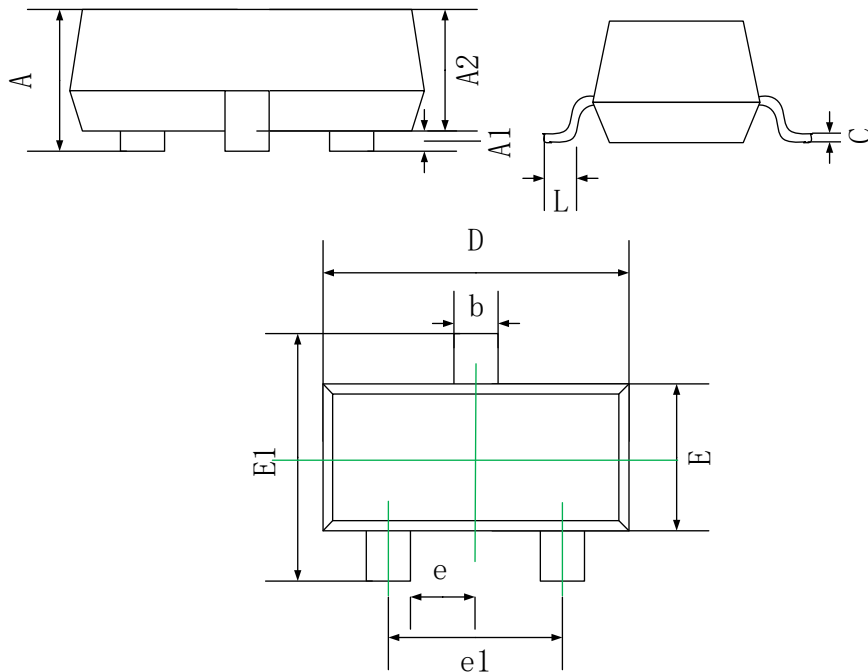
**ON Characteristics**



**OFF Characteristics**

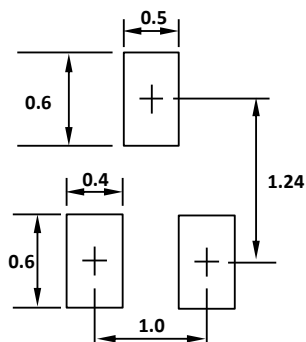


## SOT-523 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.70	0.90
A1	0.00	0.10
A2	0.70	0.80
b	0.25	0.35
c	0.10	0.20
D	1.50	1.70
E	0.70	0.90
E1	1.45	1.75
e	0.50 TYP.	
e1	0.90	1.10
L	0.40 REF.	
L1	0.26	0.46

## SOT-523 Suggested layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)