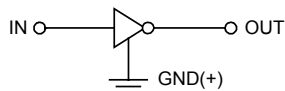
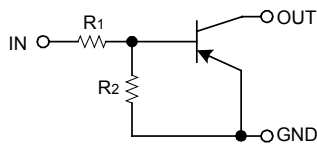


**PNP DIGITAL TRANSISTOR  
(BUILT-IN RESISTORS)**

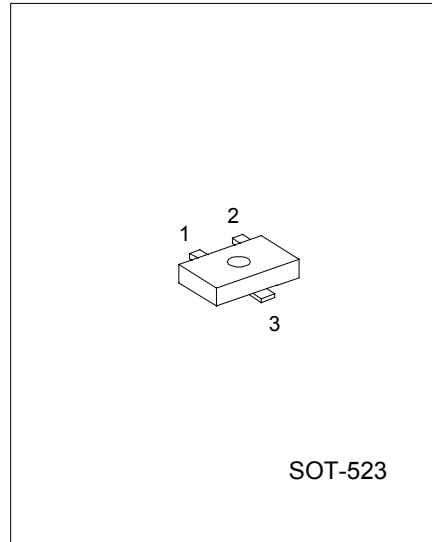
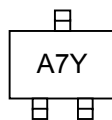
**FEATURES**

- \* 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 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.

**EQUIVALENT CIRCUIT**



**MARKING**



SOT-523

1: GND    2: IN    3: OUT

**ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)**

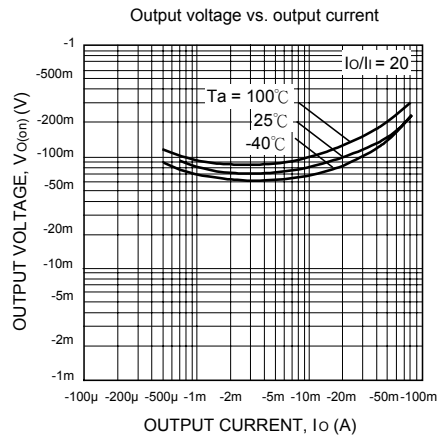
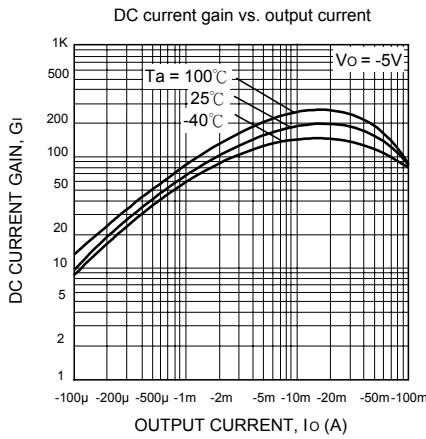
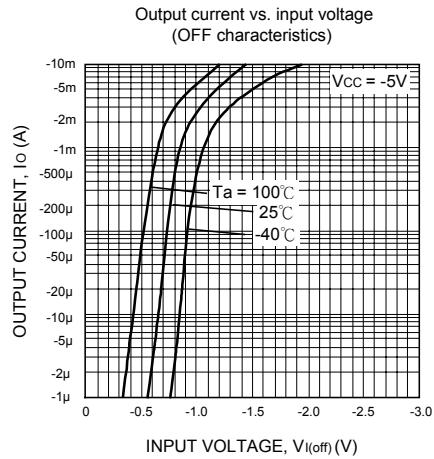
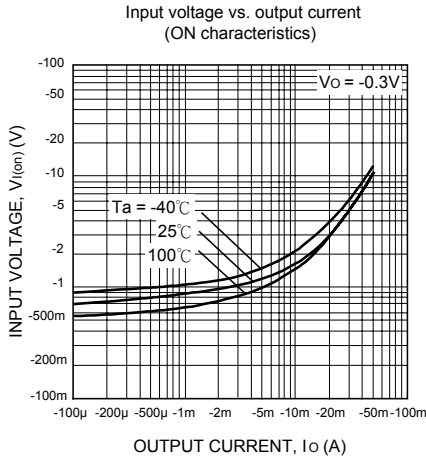
PARAMETER	SYMBOL	RATINGS	UNIT
Supply voltage	V <sub>cc</sub>	-50	V
Input voltage	V <sub>i</sub>	-40 ~ +6	V
Output current	I <sub>o</sub>	-70	mA
	I <sub>c (Max.)</sub>	-100	
Power Dissipation	P <sub>d</sub>	150	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 ~ +150	°C

**ELECTRICAL CHARACTERISTICS (Ta = 25°C)**

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input voltage	V <sub>i (off)</sub>	V <sub>cc</sub> =-5V, I <sub>o</sub> =-100 μA			-0.3	V
	V <sub>i (on)</sub>	V <sub>o</sub> =-0.3V, I <sub>o</sub> =-1mA	-1.4			
Output voltage	V <sub>o (on)</sub>	I <sub>o</sub> /I <sub>i</sub> =-5mA/-0.25mA		-0.1	-0.3	V
Input current	I <sub>i</sub>	V <sub>i</sub> =-5V			-0.88	mA
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> =-5mA	68			
Input resistance	R <sub>1</sub>		7	10	13	KΩ
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>		3.7	4.7	5.7	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>E</sub> =5mA, f=100MHz *		250		MHz

\* Transition frequency of the device

ELECTRICAL CHARACTERISTIC CURVES



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