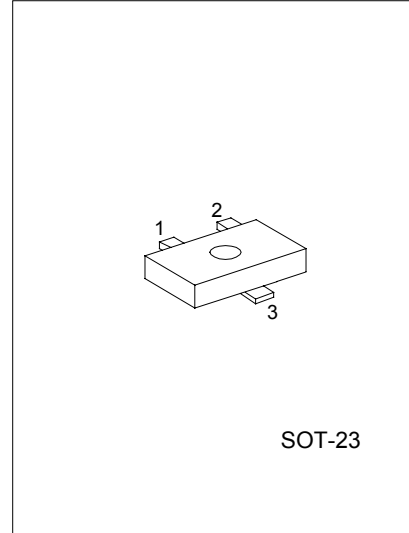


NPN DIGITAL TRANSISTOR
(BUILT-IN RESISTORS)

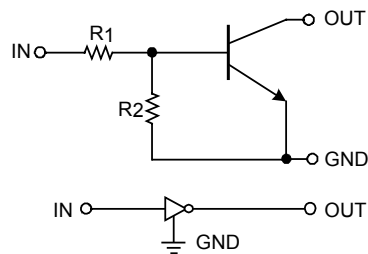
FEATURES

- *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 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.

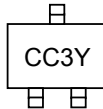


1: GND 2: IN 3: OUT

EQUIVALENT CIRCUIT



MARKING



SOT-23

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ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

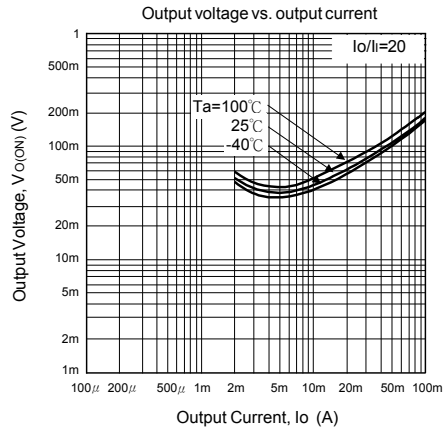
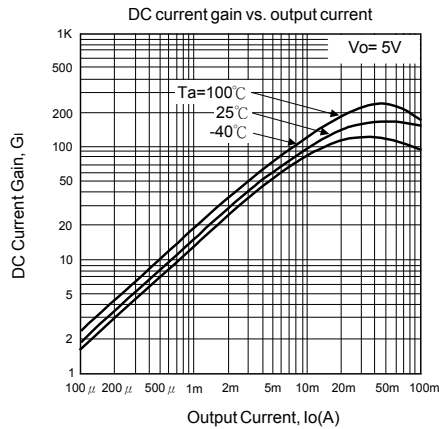
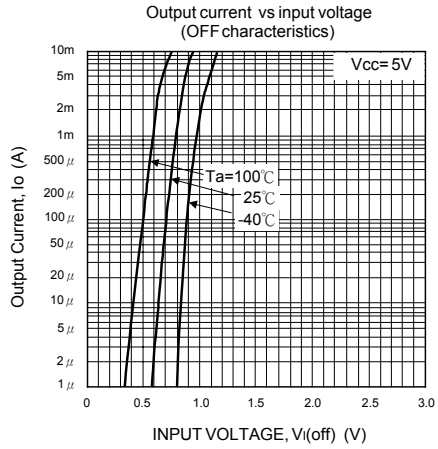
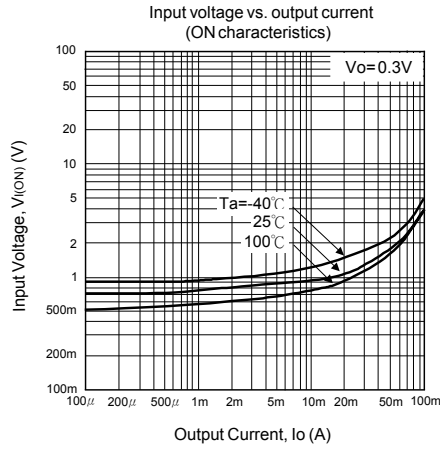
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{CC}	50	V
Input Voltage	V _{IN}	-5 ~ +12	V
Output Current	I _O	100	mA
	I _{C(MAX)}	100	mA
Power Dissipation	P _D	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V _{I(off)}	V _{CC} = 5V, I _O =100 μA			0.3	V
	V _{I(ON)}	V _O = 0.3V, I _O = 20mA	3			
Output Voltage	V _{O(ON)}	I _O /I _I = 10mA/0.5 mA		0.1	0.3	V
Input Current	I _I	V _I = 5V			3.8	mA
Output Current	I _{O(off)}	V _{CC} = 50V, V _I =0V			0.5	μA
DC Current Gain	G _I	V _O = 5V, I _O = 10mA	33			
Input Resistance	R _I		1.54	2.2	2.86	kΩ
Resistance Ratio	R ₂ /R ₁		3.6	4.5	5.5	
Transition Frequency	f _T	V _{CE} = 10 V, I _E = -5mA, f=100MHz*		250		MHz

*Transition frequency of the device

ELECTRICAL CHARACTERISTIC CURVES



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