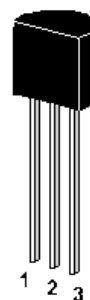


ST-TA114

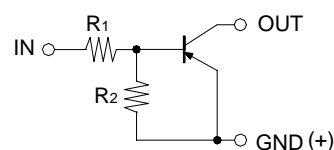
PNP digital transistors (built-in resistors)

Features:

- 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.



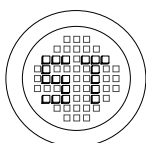
1.GND 2.OUT 3.IN
TO-92 Plastic Package



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-40 to +10	V
Output Current	I_O	-50	mA
	$I_{C(Max.)}$	-100	
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	?
Storage Temperature Range	T_s	-55 to +150	?

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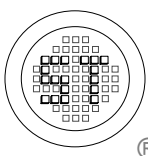
ST-TA114

Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $I_O=-5\text{mA}$, $V_O=-5\text{V}$	G_1	30	-	-	-	
Output Current at $V_{CC}=-50\text{V}$	$I_{O(\text{off})}$	-	-	-0.5	μA	
Input Voltage	at $V_{CC}=-5\text{V}$, $I_O=-100\mu\text{A}$	$V_{I(\text{off})}$	-	-	-0.5	V
	at $V_O=-0.3\text{V}$, $I_O=-10\text{mA}$	$V_{I(\text{on})}$	-3	-	-	
Output Voltage at $I_O=-10\text{mA}$, $I_I=-0.5\text{mA}$	$V_{O(\text{on})}$	-	-	-0.3	V	
Input Current at $V_I=-5\text{V}$	I_I	-	-	-0.88	mA	
Input Resistance	R_1	7	10	13	k Ω	
Resistance Ratio	R_2/R_1	0.8	1	1.2	-	
Transition frequency * at $I_E=5\text{mA}$, $V_{CE}=-10\text{V}$, $f=100\text{MHz}$	f_T	-	250	-	MHz	

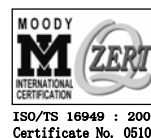
* Transition frequency of the device.

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Dated : 05/01/2004