

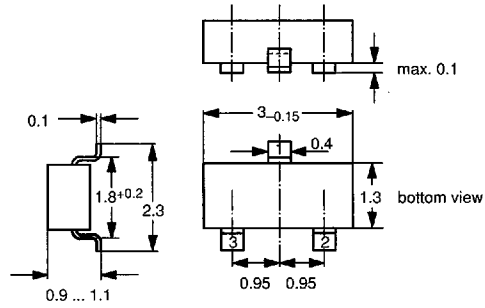
DTA114EK

PNP Digital Transistor

with built-in bias resistor. This allows inverter circuit configuration without external resistors for input.

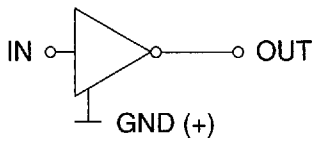
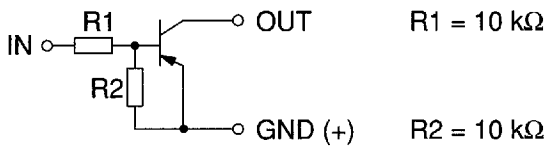
The pin configuration is the following:

- 1 = Collector/OUT
- 2 = Base/IN
- 3 = Emitter/GND



Plastic Package JEDEC TO-236
23 A 3 according to DIN 41869
The case is impervious to light.

Weight approximately 0.008 g
Dimensions in mm



Equivalent circuit

Absolute Maximum Ratings

	Symbol	Value	Unit
Supply Voltage	$-V_{SUP}$	50	V
Input Voltage	$-V_I$	40	V
	V_I	10	V
Collector Current	$-I_C$	50	mA
Peak Collector Current	$-I_{CM}$	100	mA
Power Dissipation	P_{tot}	200 ¹⁾	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_S	-55 to +125	°C

¹⁾ Device on fiberglass substrate 30 mm x 10 mm, pad size 2 mm x 2 mm

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

	Symbol	Min.	Typ.	Max.	Unit
Input OFF Voltage at $-V_{SUP} = 5\text{ V}$, $-I_O = 100\text{ }\mu\text{A}$	$-V_{I(OFF)}$	0.5	–	–	V
Input ON Voltage at $-V_O = 0.3\text{ V}$, $-I_O = 10\text{ mA}$	$-V_{I(ON)}$	–	–	3.0	V
Output ON Voltage at $-I_O = 10\text{ mA}$, $-I_I = 0.5\text{ mA}$	$-V_{O(ON)}$	–	0.1	0.3	V
Input Current at $V_I = 5\text{ V}$,	$-I_I$	–	–	0.88	V
Output OFF Current at $-V_{SUP} = 30\text{ V}$, $V_I = 0\text{ V}$	$-I_{O(OFF)}$	–	–	10	μA
DC Current Gain at $-I_O = 5\text{ mA}$, $-V_O = 5\text{ V}$	G_I	30	–	–	–
Input Resistance	R_I	–	10	–	$\text{k}\Omega$
Resistance Ratio	R_2/R_1	0.8	1	1.2	–
Transition Frequency at $-V_{CE} = 10\text{ V}$, $I_E = 5\text{ mA}$	f_T	–	250	–	MHz
Collector Base Capacitance at $-V_{CB} = 10\text{ V}$, $I_E = 0\text{ mA}$, $f = 1\text{ MHz}$	C_{ob}	–	4.7	–	pF
Switching Times at $-V_{SUP} = 5\text{ V}$, $-V_I = 5\text{ V}$, $R_L = 1\text{ k}\Omega$					
Rise Time	t_r	–	0.06	–	μs
Storage Time	t_s	–	1.1	–	μs
Fall Time	t_f	–	0.24	–	μs