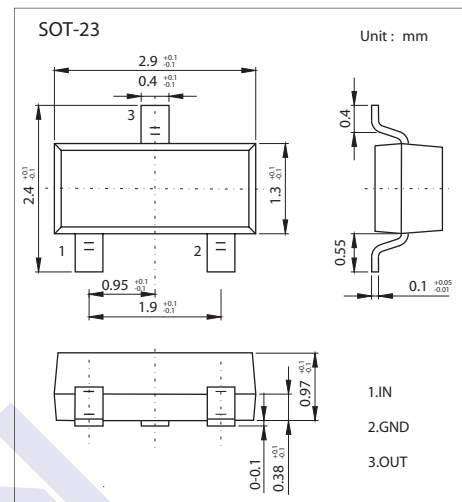
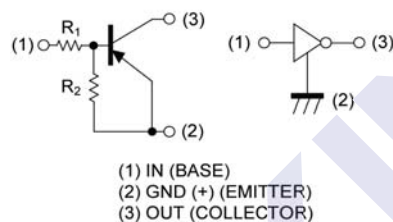


Digital Transistors

KTA207

■ Features

- Built-In Biasing Resistors, $R_1 = 22k\Omega$, $R_2 = 47k\Omega$
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see inner circuit).
- Only the on/off conditions need to be set for operation, making the circuit design easy.
- Marking:35

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

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	-50	V
Input voltage	V_{IN}	-40 to 10	
Output current	I_O	-50	mA
Collector current (Note 1)	$I_{C(\text{Max.})}$	-100	
Power dissipation (Note 2)	P_D	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(\text{off})}$	$V_{CC} = -5V$, $I_O = -100\mu\text{A}$			-0.4	V
	$V_{I(\text{on})}$	$V_O = -0.3V$, $I_O = -2\text{mA}$	-2.5			
Output voltage	$V_{O(\text{on})}$	$I_O = -10\text{mA}$, $I_I = -0.5\text{mA}$		-100	-300	mV
Input current	I_I	$V_I = -5V$			-360	μA
Output current	$I_{O(\text{off})}$	$V_{CC} = -50V$, $V_I = 0V$			-500	nA
DC current gain	G_I	$V_O = -5V$, $I_O = -5\text{mA}$	68			
Input resistance	R_1		15.4	22	28.6	$k\Omega$
Resistance ratio	R_2/R_1		1.7	2.1	2.6	
Transition frequency (Note 1)	f_T	$V_{CE} = -10V$, $I_E = 5\text{mA}$, $f = 100\text{MHz}$		250		MHz

Note 1: Characteristics of built-in transistor

Note 2: Each terminal mounted on a reference land.

Digital Transistors

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■ Typical Characteristics

Fig.1 Input voltage vs. output current (ON characteristics)

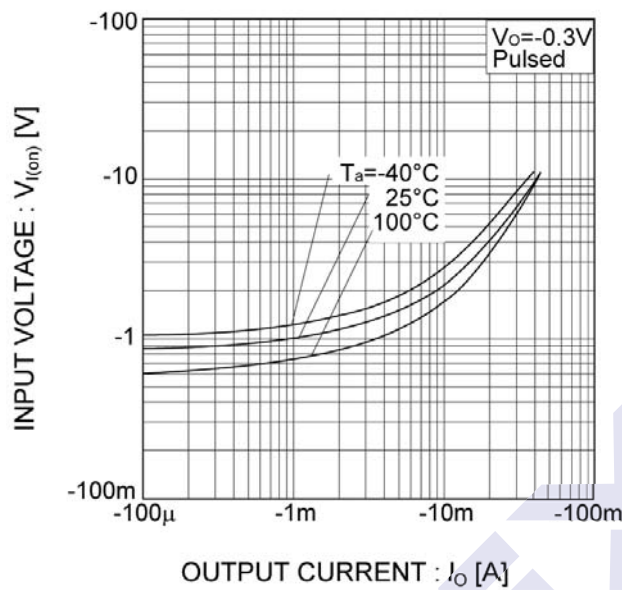


Fig.2 Output current vs. input voltage (OFF characteristics)

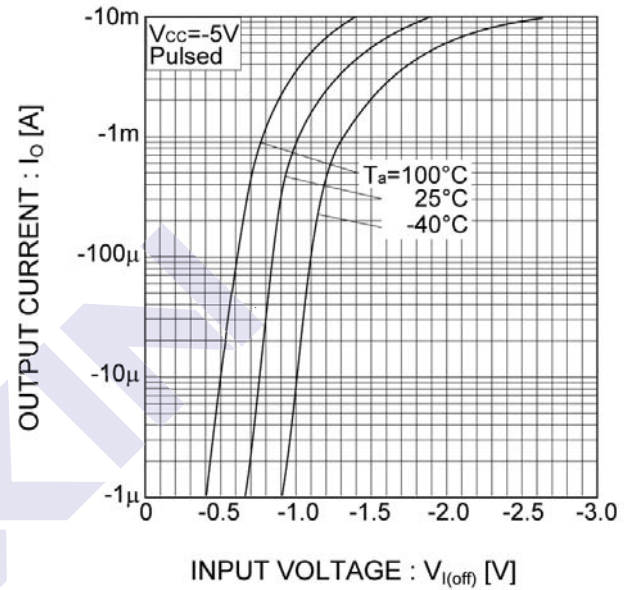


Fig.3 Output current vs. output voltage

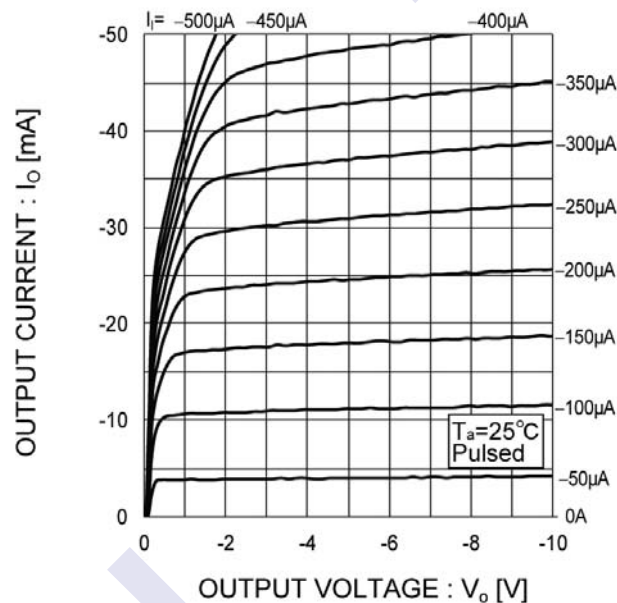


Fig.4 DC current gain vs. output current

