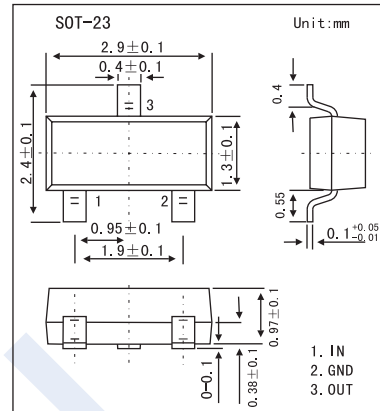
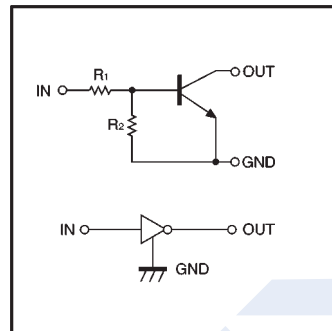


Digital Transistors

DTC114EK (KDTC114EK)

■ Features

- Repetitive peak off-state voltages :50V
- The bias resistors consist of thinfilm resistors with complete isolation to allow negative biasing of the input.
- Only the on/off conditions need to be set for operation, making device design easy.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Supply Voltage	V _{CC}	50	V
Input Voltage	V _{IN}	-10~+40	V
Output Current	I _o	50	mA
	I _{C (maxc)}	100	
Power Dissipation	P _d	150	mW
Junction Temperature	T _J	150	°C
Storage temperature range	T _{stg}	-55 to 150	

Digital Trtransistors

DTC114EK (KDTC114EK)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Unit
Input Voltage	$V_{I(off)}$	$V_{CC}=5V, I_o=100\mu A$			0.5	V
	$V_{I(on)}$	$V_o=0.3V, I_o=10mA$	3			
Output Voltage	$V_o(on)$	$I_o=10mA, I_i=0.5mA$	3	0.1	0.3	
Input Current	I_i	$V_i=5V$		0.1	0.88	mA
Output Current	$I_o(off)$	$V_{CC}=50V, V_i=0V$			0.5	μA
DC Current Gain	G_I	$V_o=5V, I_o=5mA$	30			
Input Resistance	R_1		7	10	13	k Ω
Resistance Ratio	R_2/R_1		0.8	1	1.2	
Transition Frequency	f_T	$V_{CE}=5V, I_E=-5mA, f=100MHz$		250		MHz

■ Marking

Marking	24
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Digital Transistors

DTC114EK (KDTC114EK)

■ Typical Characteristics

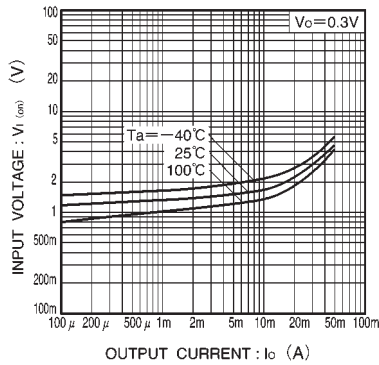


Fig.1 Input voltage vs. output current (ON characteristics)

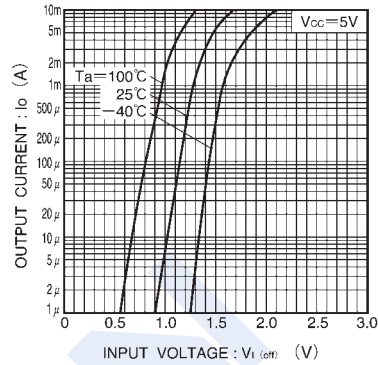


Fig.2 Output current vs. input voltage (OFF characteristics)

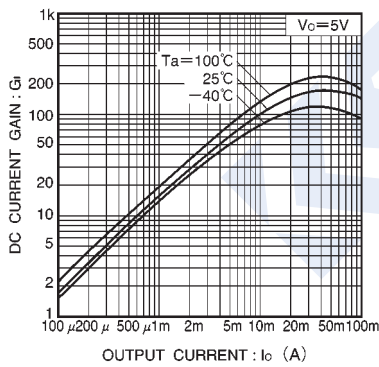


Fig.3 DC current gain vs. output current

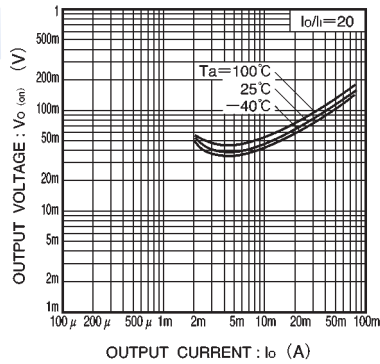


Fig.4 Output voltage vs. output current