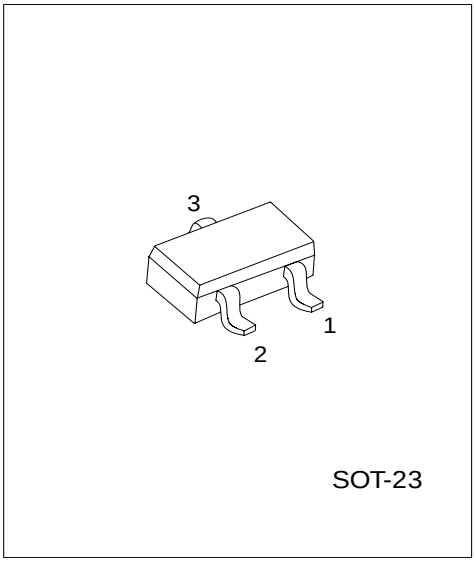
DTA114E

PNP EPITAXIAL SILICON TRANSISTOR

PNP DIGITAL TRANSISTOR (BUILT-IN RESISTORS)

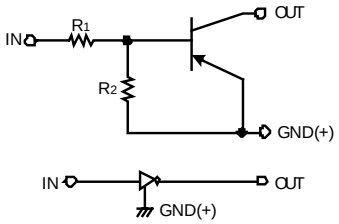


*Pb-free plating product number:DTA114EL

■ FEATURES

*Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see the equivalent circuit).
*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.

■ EQUIVALENT CIRCUIT



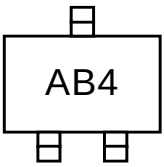
■ PIN CONFIGURATION

PIN NO.	PIN NAME
1	GND
2	IN
3	OUT

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead free		
DTA114E-AE3-R	DTA114EL-AE3-R	SOT-23	Tape Reel

■ MARKING



■ ABSOLUATE MAXIUM RATINGS (Ta = 25℃)

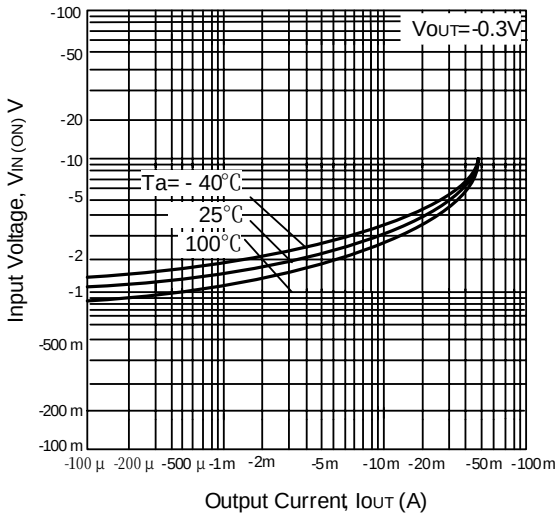
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-40 ~ +10	V
Output Current	$I_{OUT(MAX)}$	-100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-40 ~ +150	℃

■ ELECTRICAL CHARACTERISTICS (Ta= 25℃, unless otherwise specified.)

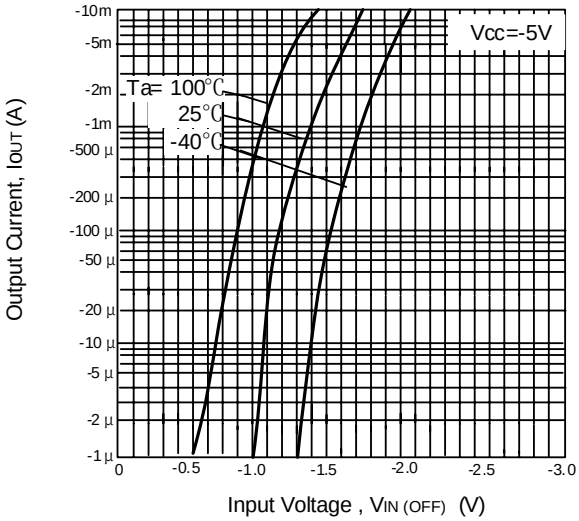
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(off)}$	V_{CC}= -5V, I_{OUT}= -100 μA			-0.5	V
	$V_{IN(ON)}$	V_{OUT}= -0.3V, I_{OUT}= -10mA	-3			
Output Voltage	$V_{OUT(ON)}$	I_{OUT}/I_{IN}= -10mA/-0.5 mA			-0.3	V
Input Current	I_{IN}	V_{IN}= -5V			-0.88	mA
Output Current	$I_{OUT(off)}$	V_{CC}= -50V , V_{IN}=0V			-0.5	μA
DC Current Gain	G_V	V_{OUT}= -5V, I_{OUT}= -5mA	30			
Input Resistance	R_1		7	10	13	kΩ
Resistance Ratio	R_2/R_1		0.8	1	1.2	
Transition Frequency	f_T	V_{CE}= -10 V, I_E=5mA, f=100MHz		250		MHz

■ TYPICAL CHARACTERICS

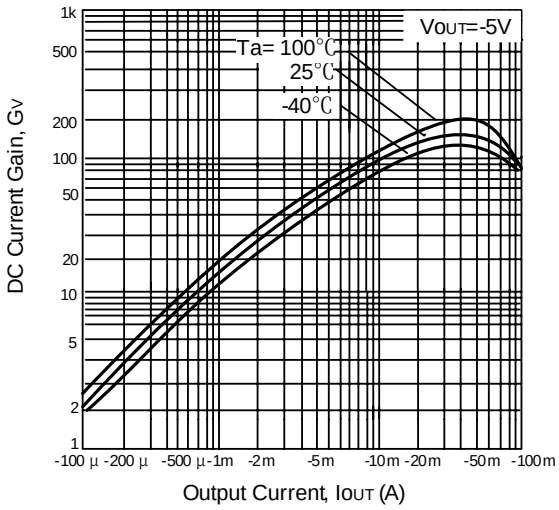
Input Voltage vs.Output Current
(ON Characterristics)



Output Current vs Input Voltage
(OFF Characterristics)



DC Current Gain vs. Output Current



Output Voltage vs. Output Current