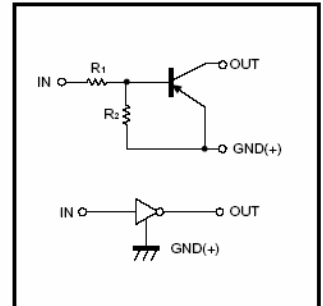# TRANSISTOR(PNP)

FEATURES

1. Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit).
2. 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.
3. Only the on/off conditions need to be set for operation, making device design easy.

● **Equivalent circuit**

PIN CONNENCTIONS AND MARKING

DTA114YE
SOT-523   Addreviated symbol: 54
1.IN
2.GND
3.OUT

DTA114YUA
SOT-323   Addreviated symbol: 54
1.IN
2.GND
3.OUT

DTA114YKA
SOT-23-3L   Addreviated symbol: 54
1.IN
2.GND
3.OUT

DTA114YCA
SOT-23   Addreviated symbol: 54
1.IN
2.GND
3.OUT

DTA114YSA
TO-92S
1.GND
2.OUT
3.IN

Absolute maximum ratings(Ta=25℃)

Parameter	Symbol	Limits (DTA114Y□)					Unit
		E	UA	KA	CA	SA	
Supply voltage	V_{CC}	-50					V
Input voltage	V_{IN}	-40to+6					V
Output current	I_O	-70					mA
	$I_{C(Max.)}$	-100					mA
Power dissipation	P_C	150	200			300	mW
Junction temperature	Tj	150					℃
Storage temperature	Tstg	-55 to+ 150					℃

Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$			-0.3	V	V_{CC}=-5V ,I_O=-100µA
	$V_{I(on)}$	-1.4				V_O=-0.3V ,I_O=-1mA
Output voltage	$V_{O(on)}$			-0.3	V	I_O/I_I=-5mA/-0.25mA
Input current	I_I			-0.88	mA	V_I=-5V
Output current	$I_{O(off)}$			-0.5	µA	V_{CC}=-50V ,V_I=0
DC current gain	G_I	68				V_O=-5V ,I_O=-5mA
Input resistance	R_1	7	10	13	KΩ	
Resistance ratio	R_2/R_1	3.7	4.7	5.7		
Transition frequency	f_T		250		MHz	V_O=-10V ,I_O=5mA,f=100MHz

Typical Characteristics
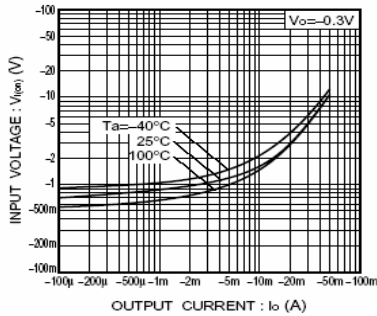
●Electrical characteristic curves

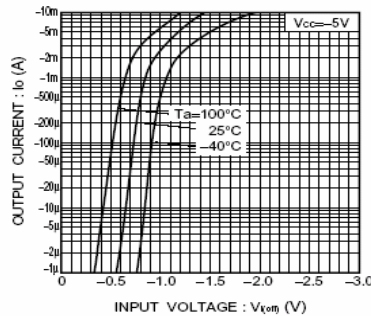Fig.1 Input voltage vs. output current (ON characteristics)

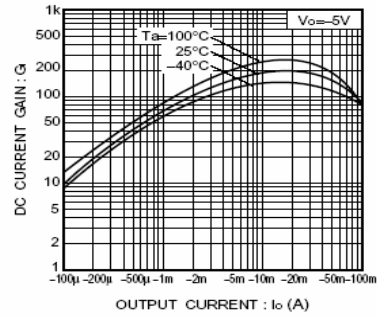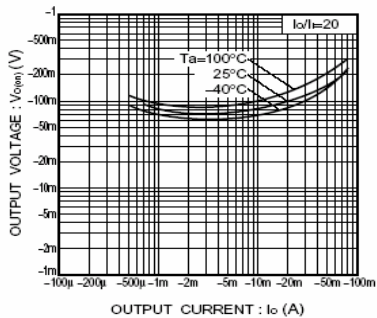Fig.2 Output current vs. input voltage (OFF characteristics)

Fig.3 DC current gain vs. output current

Fig.4 Output voltage vs. output current

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