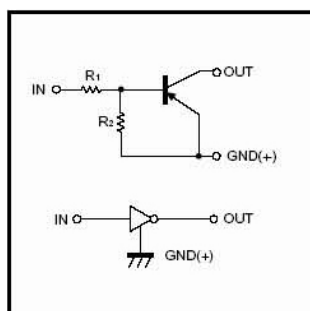


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

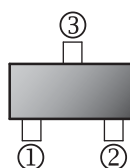
- Built-in bias resistors enable the configuration of an inverter circuit without connecting input resistors (see equivalent circuit).
- Only the on/off conditions need to be set for operation, making device design easy.
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.

EQUIVALENT CIRCUIT



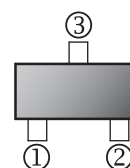
DTA114YE (SOT-523)

①: In
②: Gnd
③: Out



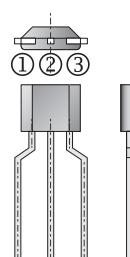
DTA114YUA (SOT-323)

①: In
②: Gnd
③: Out



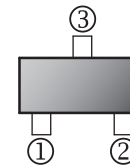
DTA114YSA (TO-92S)

①: In
②: Out
③: Gnd



DTA114YCA (SOT-23)

①: In
②: Gnd
③: Out



ABSOLUTE MAXIMUM RATINGS at Ta = 25°C

Parameter	Symbol	Ratings				Unit
		E	UA	CA	SA	
Supply voltage	V _{CC}	-50				V
Input voltage	V _{IN}	-40 ~ +6				V
Output current	I _O	-70				mA
	I _{C(MAX)}	-100				
Power dissipation	P _C	150	200		300	mW
Junction & Storage temperature	T _J , T _{STG}	150, -55~150				℃

ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS at Ta = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Input voltage	$V_{I(OFF)}$	-	-	-0.3	V	$V_{CC}=-5V, I_O=-100\mu A$
	$V_{I(ON)}$	-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_I	7	10	13	K Ω	
Resistance ratio	R_2 / R_1	3.7	4.7	5.7		
Transition frequency	f_T	-	250	-	MHz	$V_O=-10V, I_O=5mA, f=100MHz$

CHARACTERISTIC CURVES

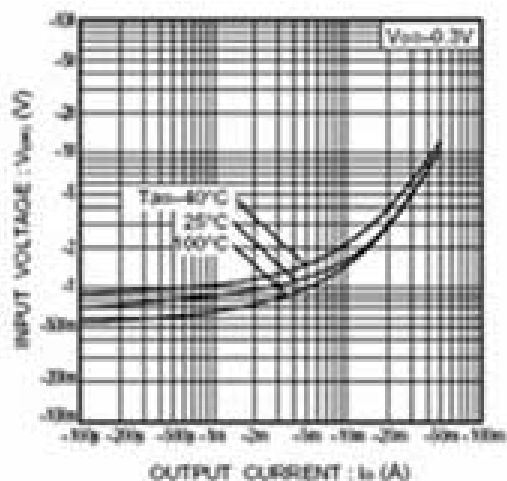


Fig.1 Input voltage vs. output current
(ON characteristics)

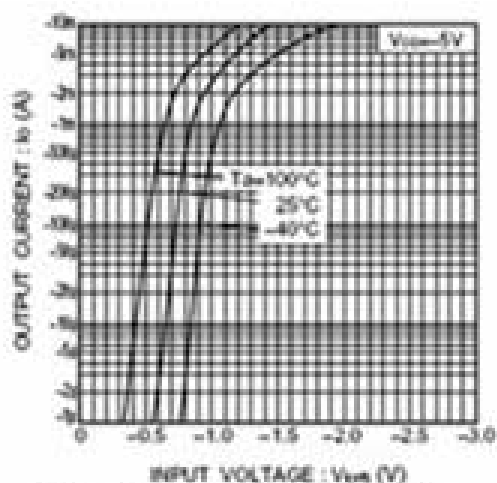


Fig.2 Output current vs. input voltage
(OFF characteristics)

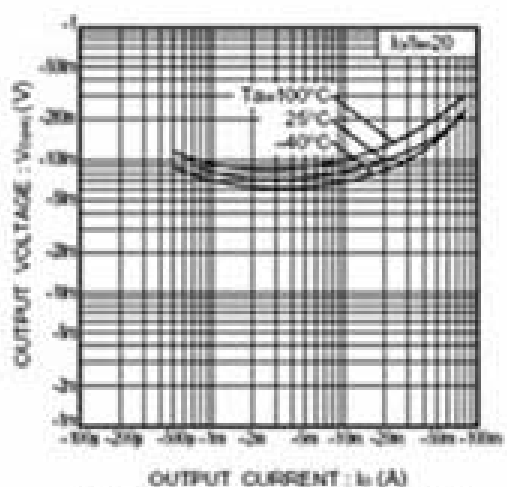


Fig.4 Output voltage vs. output
current

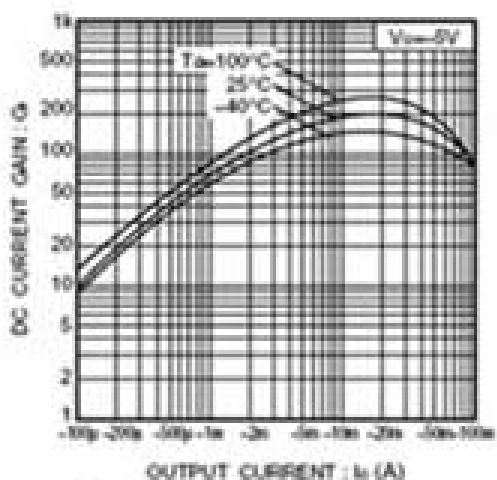


Fig.3 DC current gain vs. output
current