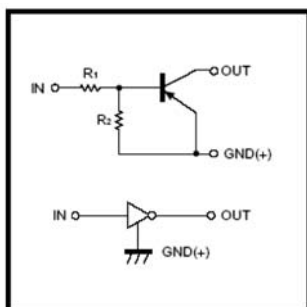


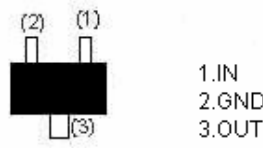
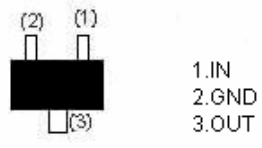
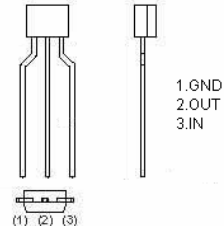

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

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



<p>DTA114EE (SOT-523)</p>  <p>1.IN 2.GND 3.OUT</p> <p>Abbreviated symbol : 14</p>	<p>DTA114EUA (SOT-323)</p>  <p>1.IN 2.GND 3.OUT</p> <p>Abbreviated symbol : 14</p>
<p>DTA114ESA (TO-92S)</p>  <p>1.GND 2.OUT 3.IN</p> <p>Abbreviated symbol : 14</p>	<p>DTA114ECA (SOT-23)</p>  <p>1.IN 2.GND 3.OUT</p> <p>Abbreviated symbol : 14</p>

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Limits (DTA114E□)				Unit
		E	UA	CA	SA	
Supply Voltage	V _{CC}	-50				V
Input Voltage	V _{IN}	-40 ~ 10				V
Output Current	I _O	-50				mA
	I _{C(MAX)}	-100				
Power Dissipation	P _D	150	200	300	mW	
Junction & Storage temperature	T _J , T _{STG}	150, -55~150				°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Input Voltage	V _{I(off)}	-	-	-0.5	V	V _{CC} = -5V, I _O = -100μA
	V _{I(on)}	-3	-	-		V _O = -0.3V, I _O = -10mA
Output Voltage	V _{O(on)}	-	-	-0.3	V	I _O /I _I = -10mA / -0.5mA
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	30	-	-		V _O = -5V, I _O = -5mA
Input Resistance	R ₁	7	10	13	KΩ	
Resistance ratio	R ₂ / R ₁	0.8	1	1.2		
Transition frequency	f _T	-	250	-	MHz	V _{CE} = -10V, I _E = -5mA, f= 100MHz

CHARACTERISTIC CURVES

● **Electrical characteristic curves**

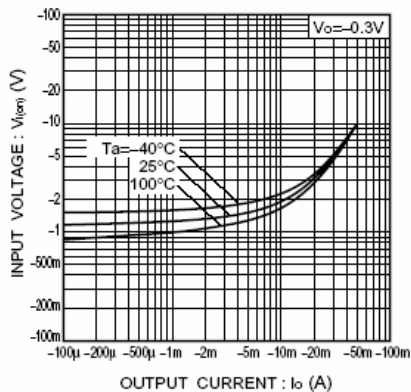


Fig.1 Input voltage vs. output current (ON characteristics)

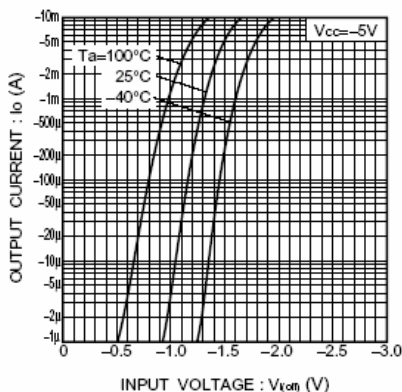


Fig.2 Output current vs. input voltage (OFF characteristics)

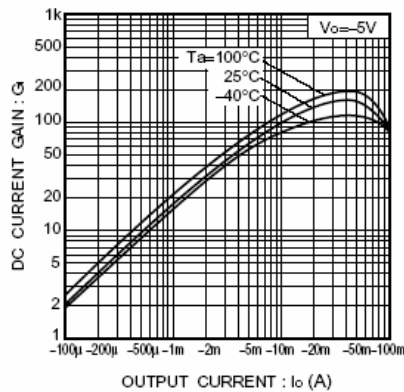


Fig.3 DC current gain vs. output current

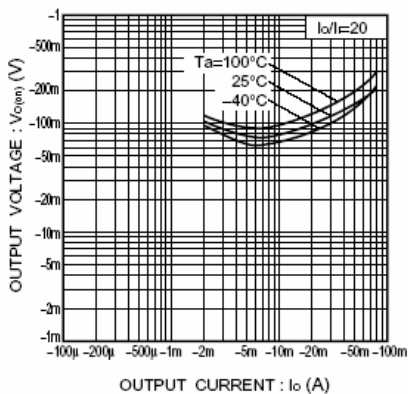


Fig.4 Output voltage vs. output current