

SOT-323 DIGITAL TRANSISTORS TRANSISTORS(PNP)

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 negative 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.

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.006 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.



MAXIMUM RATINGS (@ TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	LIMITS	UNITS
Supply voltage	V _{CC}	-50	V
Input voltage	V _{IN}	-40~+10	V
Output current	I _O	-30	mA
	I _{C(MAX)}	-100	
Power dissipation	P _d	200	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 ~150	°C

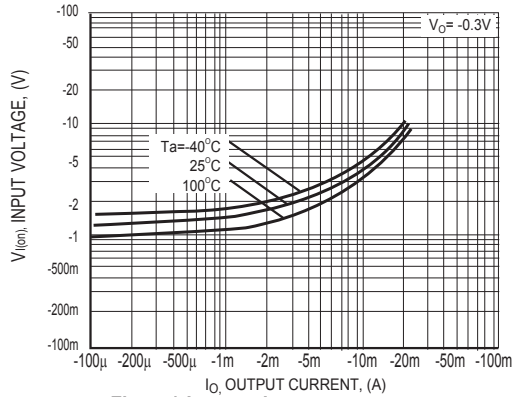
ELECTRICAL CHARACTERISTICS (@ TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS
Input voltage (V _{CC} = -5V, I _O = -100μA)	V _{I(off)}	-	-	-0.5	V
Input voltage (V _O = -0.3V, I _O = -2mA)	V _{I(on)}	-3	-	-	
Output voltage (I _O / I _I = -10mA / -0.5mA)	V _{O(on)}	-	-	-0.3	V
Input current (V _I = -5V)	I _I	-	-	-0.18	mA
Output current (V _{CC} = -50V, V _I = 0)	I _{O(off)}	-	-	-0.5	μA
DC current gain (V _O = -5V, I _O = -5mA)	G _I	68	-	-	-
Input resistance	R ₁	32.9	47	61.1	KΩ
Resistance ratio	R ₂ / R ₁	0.8	1	1.2	-
Transistion frequency (V _O = -10V, I _O = 5mA, f= 100MHz)	f _T	-	250	-	MHz

NOTE: "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2006-3

RATING AND CHARACTERISTICS CURVES (DTA144EUA)



**Figure1 Input voltage vs. output current
(ON Characteristics)**

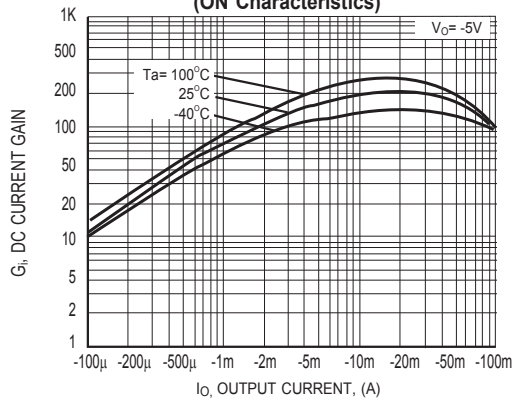
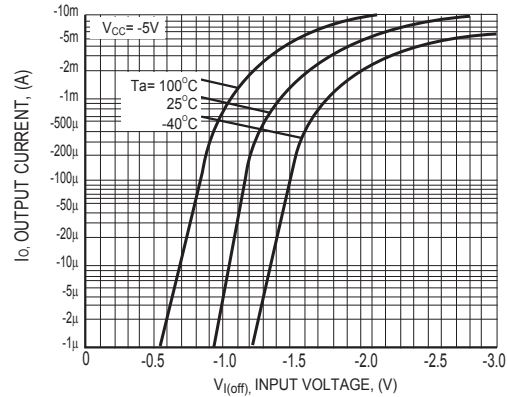


Figure3 DC current gain vs. output current



**Figure2 Output current vs input voltage
(OFF Characteristics)**

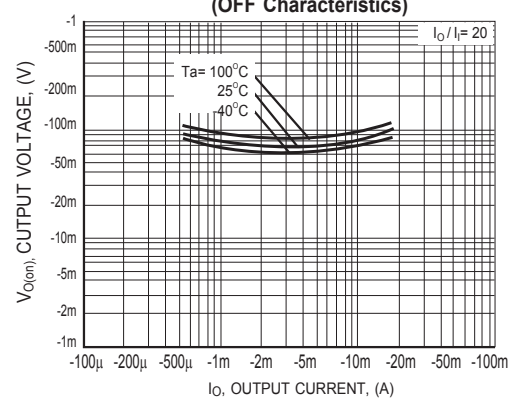


Figure4 Output voltage vs. output current

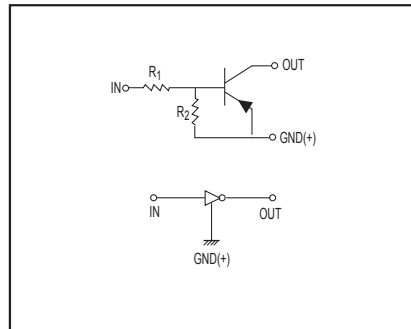


Figure5 Equivalent circuit

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