



UNISONIC TECHNOLOGIES CO.,

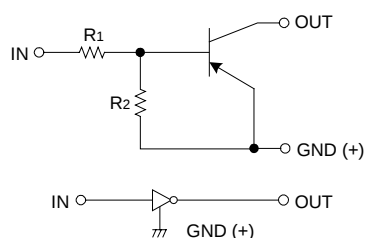
DTA143E PNP EPITAXIAL SILICON TRANSISTOR

PNP DIGITAL TRANSISTOR (BUILT-IN RESISTORS)

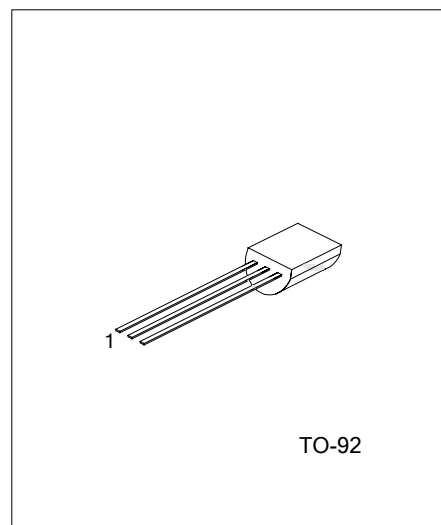
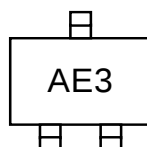
■ FEATURES

- * 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



■ MARKING



*Pb-free plating product number:DTA143EL

■ PIN CONFIGURATION

PIN NO.	PIN NAME
1	GND
2	OUT
3	IN

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead free		
DTA143E-T92-B	DTA143EL-T92-B	TO-92	Tape Box
DTA143E-T92-K	DTA143EL-T92-K	TO-92	Bulk

■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

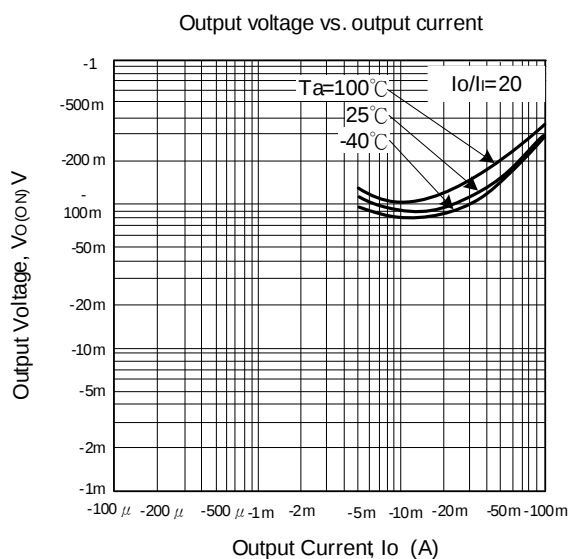
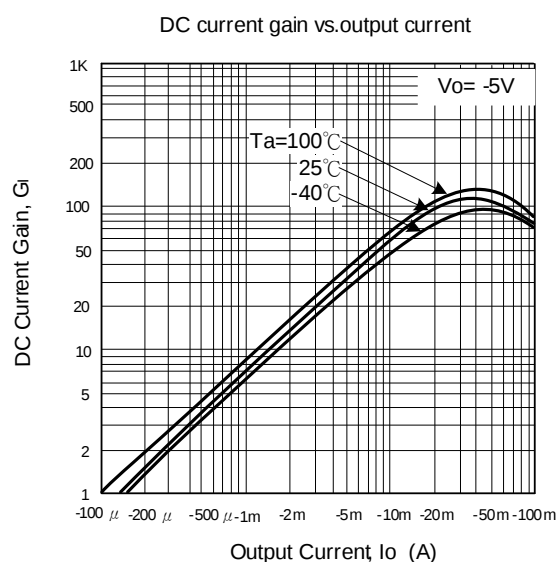
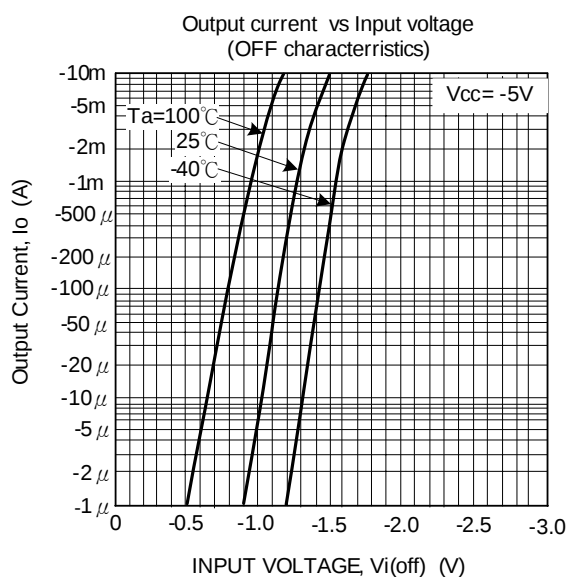
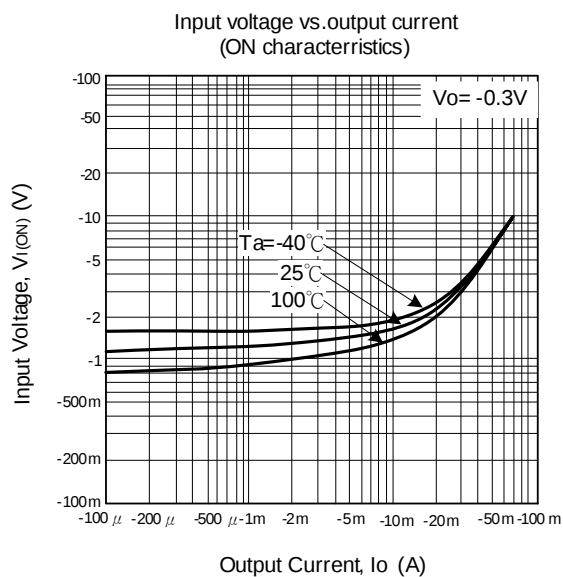
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-30~+10	V
Output Current	I_O	-100	mA
	$I_{C(max)}$	-100	
Power Dissipation	P_D	300	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC} = -5V, I_O = -100 \mu A$			-0.5	V
	$V_{I(ON)}$	$V_O = -0.3V, I_O = -20mA$	-3			
Output Voltage	$V_{O(ON)}$	$I_O/I_I = -10mA / -0.5 mA$		-0.1	-0.3	V
Input Current	I_I	$V_I = -5V$			-1.8	mA
Output Current	$I_{O(off)}$	$V_{CC} = -50V, V_I = 0V$			-0.5	μA
DC Current Gain	G_I	$V_O = -5V, I_O = -10mA$	20			
Input Resistance	R_1		3.29	4.7	6.11	k Ω
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

*Transition frequency of the device

■ TYPICAL CHARACTERISTICS



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