



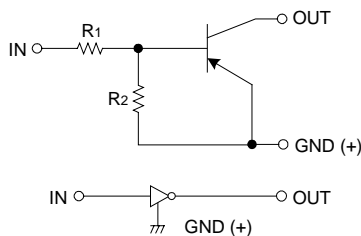
DTA143E PNP EPITAXIAL SILICON TRANSISTOR

PNP DIGITAL TRANSISTOR (BUILT-IN RESISTORS)

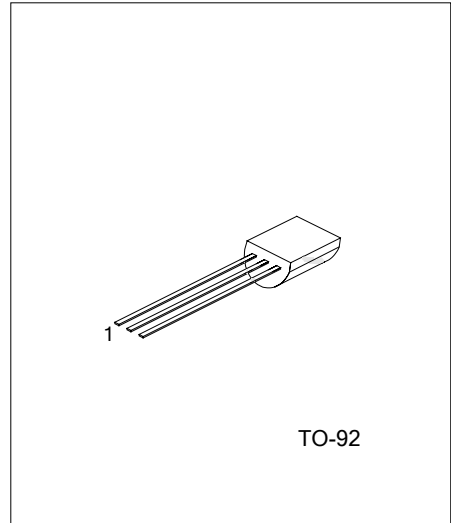
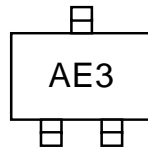
■ FEATURES

- * 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

DTA143E

PNP EPITAXIAL SILICON TRANSISTOR

■ 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

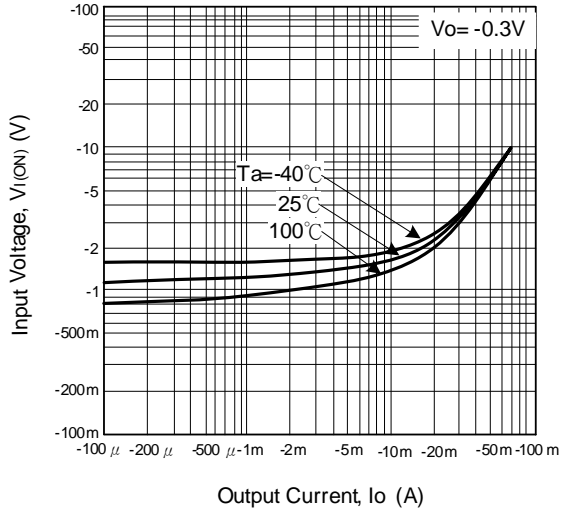
■ ELECTRICAL CHARACTERISTICS (Ta= 25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V _{I(off)}	V _{CC} = -5V, I _O =-100 μA			-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 _I		3.29	4.7	6.11	kΩ
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

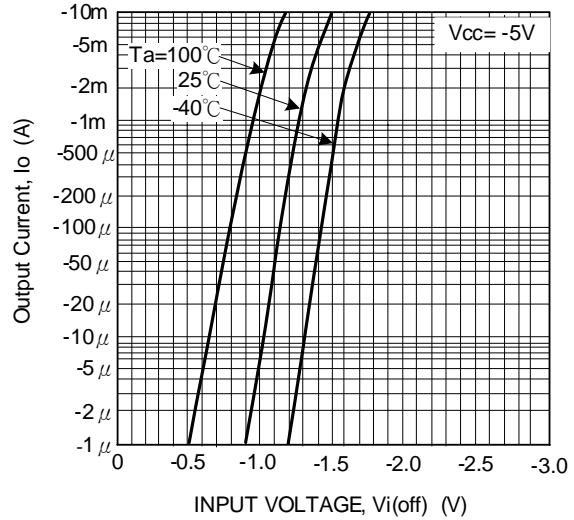
*Transition frequency of the device

■ TYPICAL CHARACTERISTICS

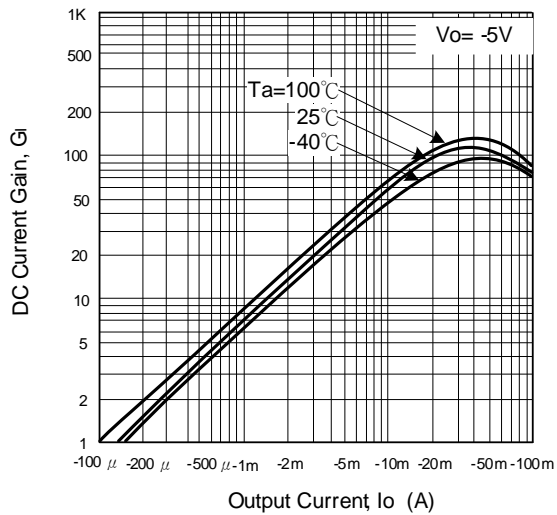
Input voltage vs. output current
(ON characteristics)



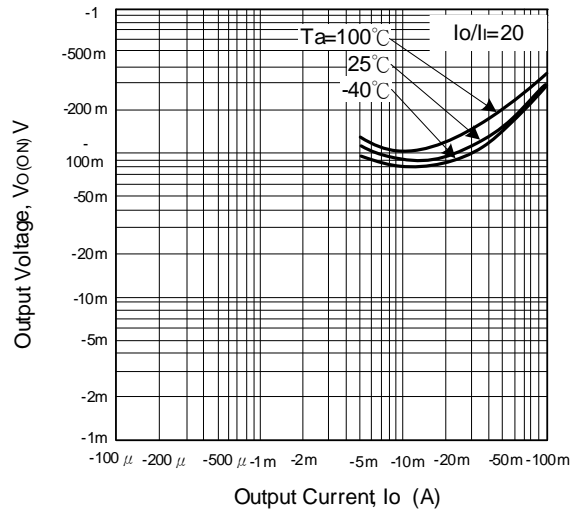
Output current vs Input voltage
(OFF characteristics)



DC current gain vs. output current



Output voltage vs. output current



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