

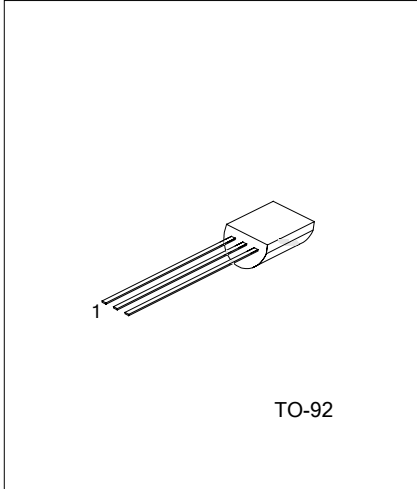


# DTA143E PNP EPITAXIAL SILICON TRANSISTOR

PNP DIGITAL TRANSISTOR (BUILT-IN RESISTORS)

### FEATURES

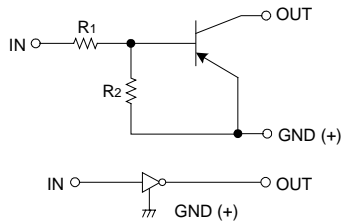
- \* Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see the equivalent circuit).
- \* The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input. They also have the advantage of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



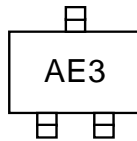
TO-92

\*Pb-free plating product number:DTA143EL

### EQUIVALENT CIRCUIT



### MARKING



### 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 <sub>CC</sub>	-50	V
Input Voltage	V <sub>IN</sub>	-30~+10	V
Output Current	I <sub>O</sub>	-100	mA
	I <sub>C(max)</sub>	-100	
Power Dissipation	P <sub>D</sub>	300	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +150	°C

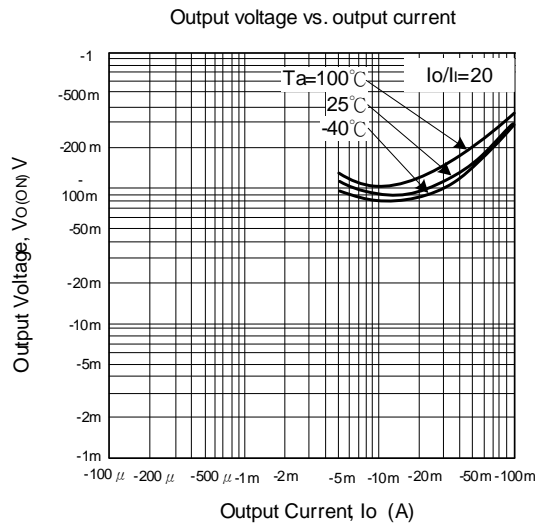
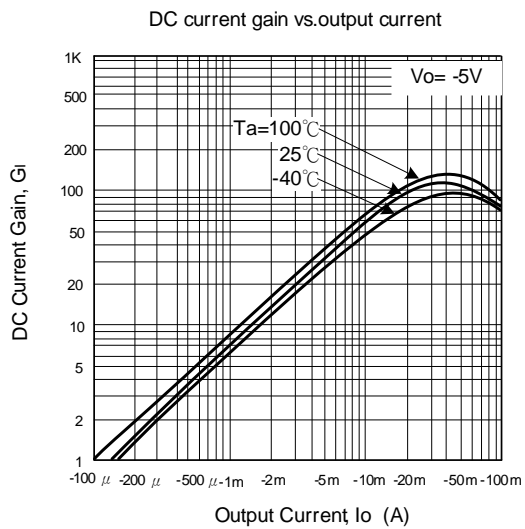
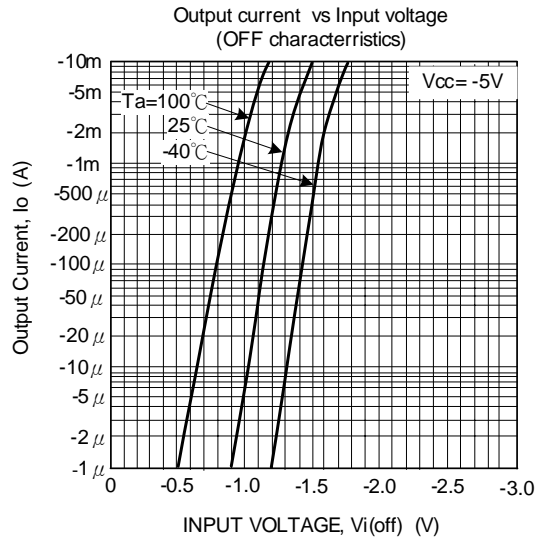
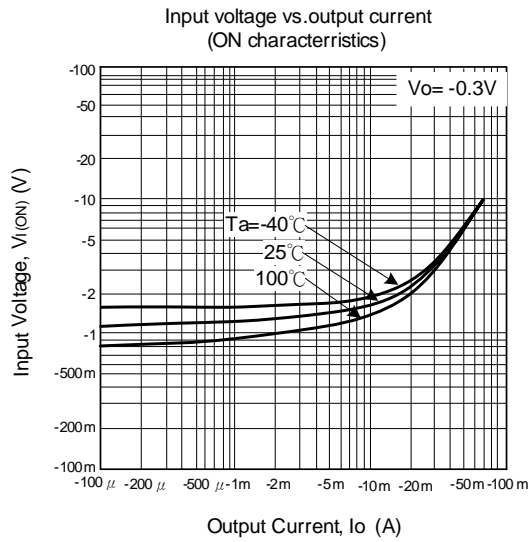
## ■ ELECTRICAL CHARACTERISTICS (Ta= 25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V <sub>I(off)</sub>	V <sub>CC</sub> = -5V, I <sub>O</sub> =-100 μA			-0.5	V
	V <sub>I(ON)</sub>	V <sub>O</sub> = -0.3V, I <sub>O</sub> = -20mA	-3			
Output Voltage	V <sub>O(ON)</sub>	I <sub>O</sub> /I <sub>I</sub> = -10mA / -0.5 mA		-0.1	-0.3	V
Input Current	I <sub>I</sub>	V <sub>I</sub> = -5V			-1.8	mA
Output Current	I <sub>O(off)</sub>	V <sub>CC</sub> = -50V, V <sub>I</sub> =0V			-0.5	μA
DC Current Gain	G <sub>I</sub>	V <sub>O</sub> = -5V, I <sub>O</sub> = -10mA	20			
Input Resistance	R <sub>I</sub>		3.29	4.7	6.11	kΩ
Resistance Ratio	R <sub>2</sub> /R <sub>1</sub>		0.8	1	1.2	
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> = -10 V, I <sub>E</sub> = 5mA, f=100MHz *		250		MHz

\*Transition frequency of the device



■ TYPICAL CHARACTERISTICS



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