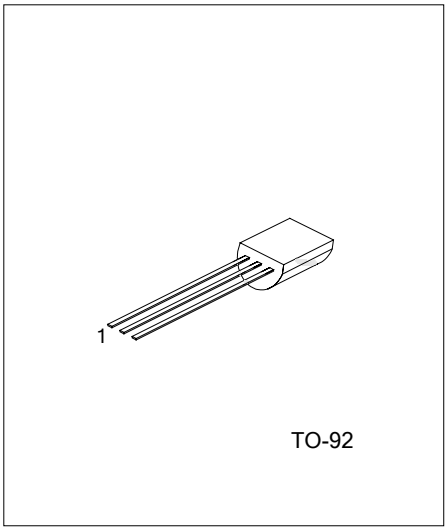
DTA143E *PNP EPITAXIAL SILICON TRANSISTOR*

PNP DIGITAL TRANSISTOR (BULT-IN RESISTORS)

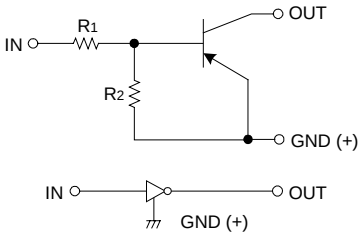


*Pb-free plating product number:DTA143EL

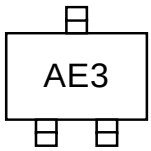
■ FEATURES

* 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



■ 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

■ ABSOLUATE MAXIUM RATINGS (Ta = 25℃)

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

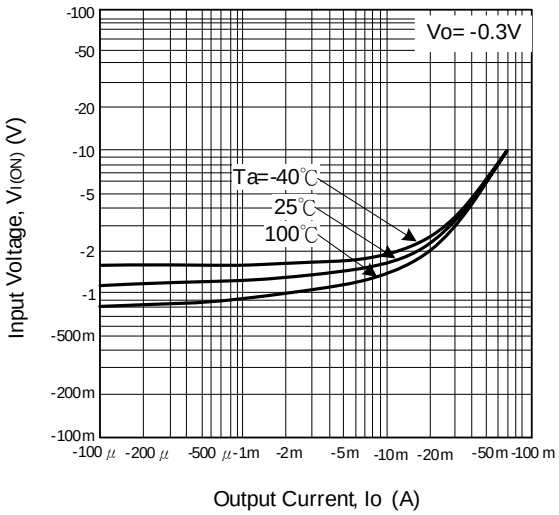
■ ELECTRICAL CHARACTERISTICS (Ta= 25℃, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	V_{CC}= -5V, I_O=-100μA			-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	R1		3.29	4.7	6.11	kΩ
Resistance Ratio	R2/R1		0.8	1	1.2	
Transition Frequency	f_T	V_{CE}= -10 V, I_E= 5mA, f=100MHz *		250		MHz

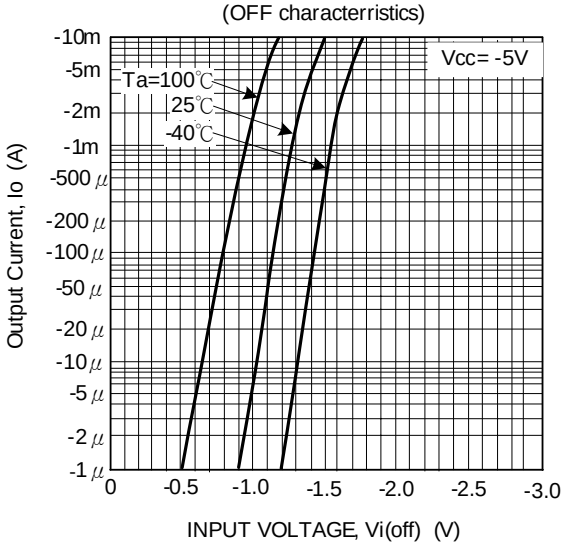
*Transition frequency of the device

■ TYPICAL CHARACTERICS

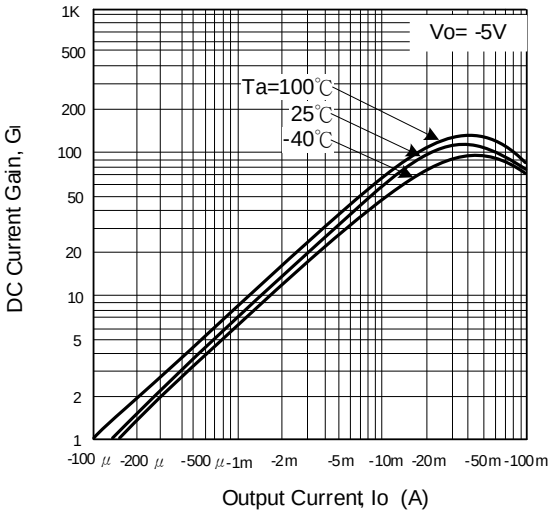
Input voltage vs.output current
(ON characterristics)



Output current vs Input voltage
(OFF characterristics)



DC current gain vs.output current



Output voltage vs. output current