Elektronische Bauelemente

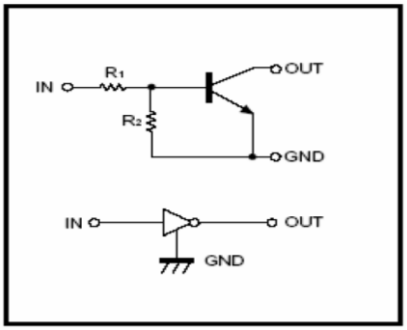
DTA143XE / DTA143XUA
DTA143XCA / DTA143XSA
PNP Digital Transistors (Built-in Resistors)

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

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 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



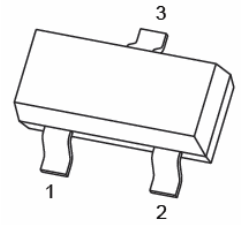
ORDER INFORMATION

Part Number	Type
DTA143X Series	Lead (Pb)-free
DTA143X Series-C	Lead (Pb)-free and Halogen-free

PIN CONNENCTIONS AND MARKING

DTA143XCA

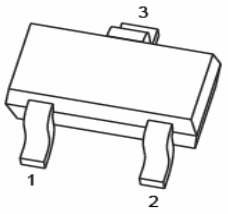
1. IN
2. GND
3. OUT



SOT-23
MARKING: 33

DTA143XE

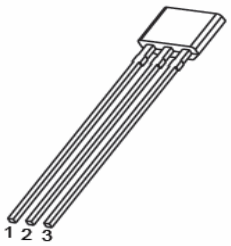
1. IN
2. GND
3. OUT



SOT-523
MARKING: 33

DTA143XSA

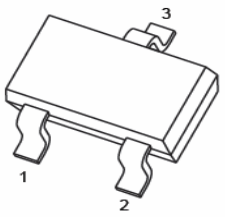
1. IN
2. GND
3. OUT



TO-92S
MARKING: A143 X□□□ ← □= Production Line Indication

DTA143XUA

1. IN
2. GND
3. OUT



SOT-323
MARKING: 33

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

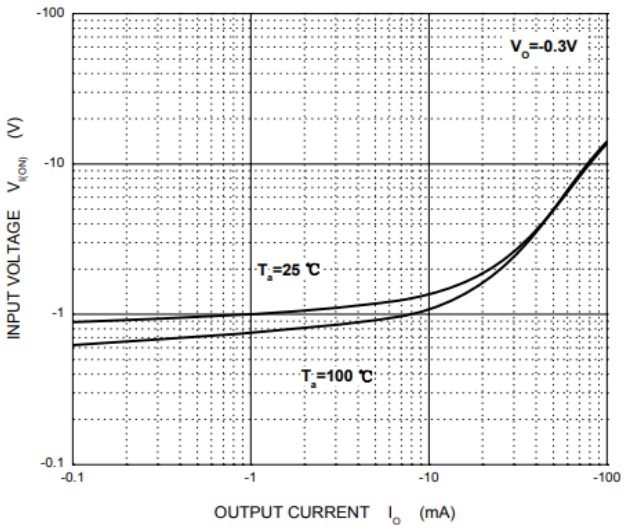
Parameter	Symbol	Limits (DTA143X☐)				Unit
		E	UA	CA	SA	
Collector-Base Voltage	V_{CC}	-50				V
Input Voltage	V_{IN}	-20~7				V
Output Current	I_O	-100				mA
Power Dissipation	P_D	150	200		300	mW
Junction & Storage Temperature	T_J, T_{STG}	150, -55~150				°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

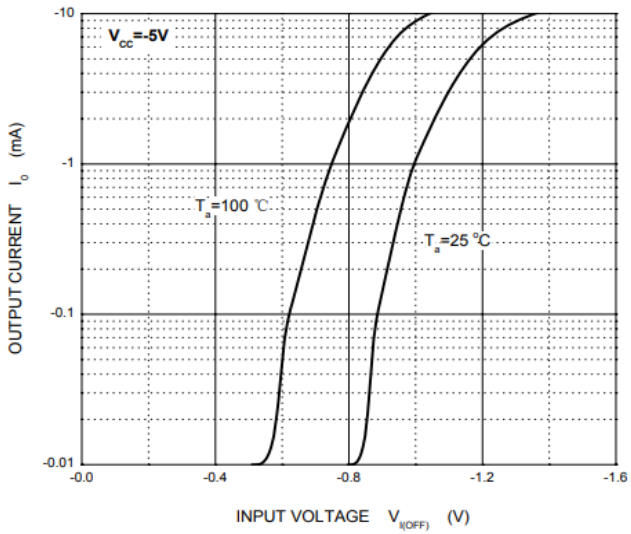
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Input Voltage	$V_{I(off)}$	-0.3	-	-	V	V_{CC}= -5V, I_O= -100μA
	$V_{I(on)}$	-	-	-2.5		V_O= -0.3V, I_O= -20mA
Output Voltage	$V_{O(on)}$	-	-0.1	-0.3	V	I_O/I_I= -10mA/-0.5mA
Input Current	I_I	-	-	-1.8	mA	V_I= -5V
Output Current	$I_{O(off)}$	-	-	-0.5	μA	V_{CC}= -50V, V_I=0
Dc Current Gain	G_I	30	-	-		V_O= -5V, I_O= -10mA
Input Resistance	R_1	3.29	4.7	6.11	kΩ	
Resistance Ratio	R_2/R_1	1.7	2.1	2.6		
Transition Frequency	f_T	-	250	-	MHz	V_O= -10V, I_O= -5mA, f=100MHz

CHARACTERISTIC CURVES

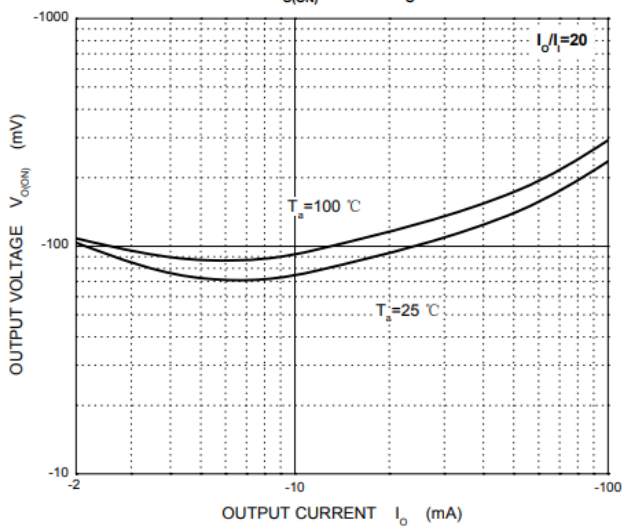
ON Characteristics



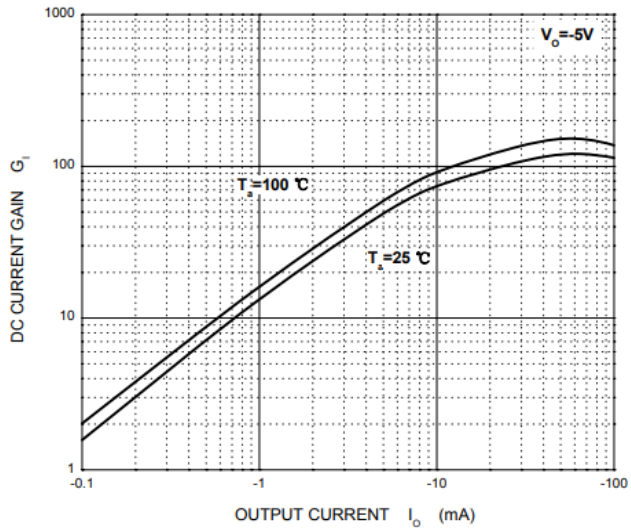
OFF Characteristics



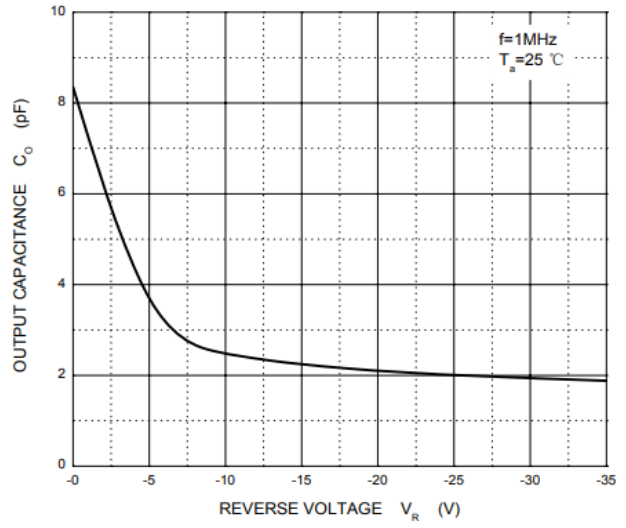
$V_{O(ON)}$ — I_O



G_I — I_O



C_O — V_R



P_D — T_a