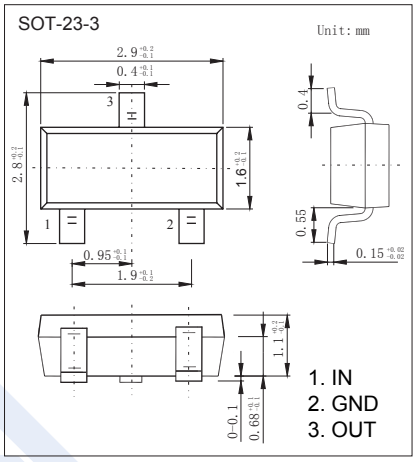
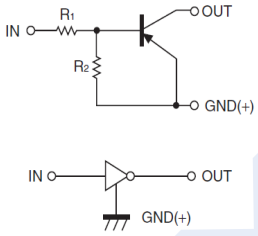
Digital Transistors

DTA143ZKA (KDTA143ZKA)



■ 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



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-30~5	
Output Current	I_O	-100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(off)}$	Vcc= -5 V , Io=-100 uA	-0.5			V
	$V_{I(on)}$	Vo= -0.3 V , Io=-5 mA			-1.3	
Output voltage	$V_{O(on)}$	Io= -5 mA, Ii=-0.25 mA			-0.3	
Input current	I_I	V_I= -5 V			-1.8	mA
Output current	$I_{O(off)}$	Vcc= -50 V , V_I =0			-0.5	uA
DC current gain	G_I	Vo=-5V,Io=-10mA	80			
Input resistance	R_1		3.29	4.7	6.11	KΩ
Resistance ratio	R_2/R_1		8	10	12	
Transition frequency	f_T	Vo= -10V, Io= 5mA,f=100MHz		250		MHz

■ Marking

Marking	E13

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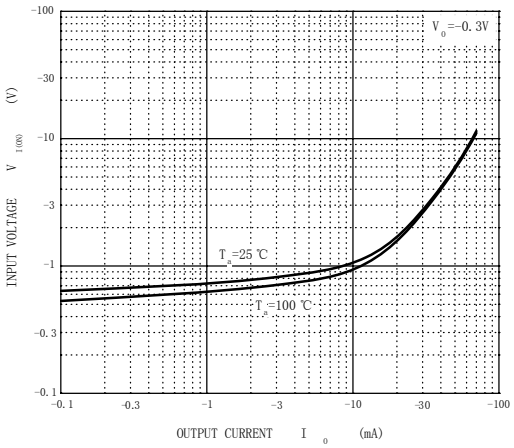
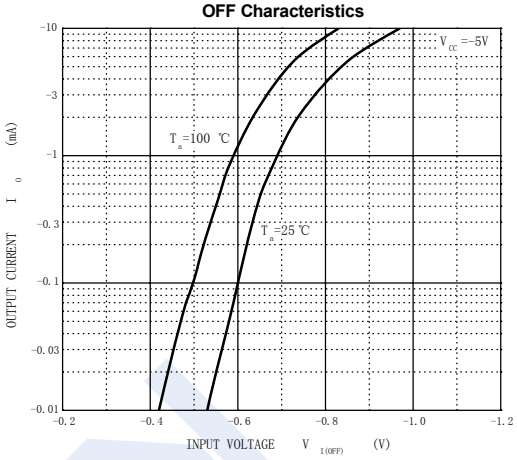
■ Typical Characterisitics

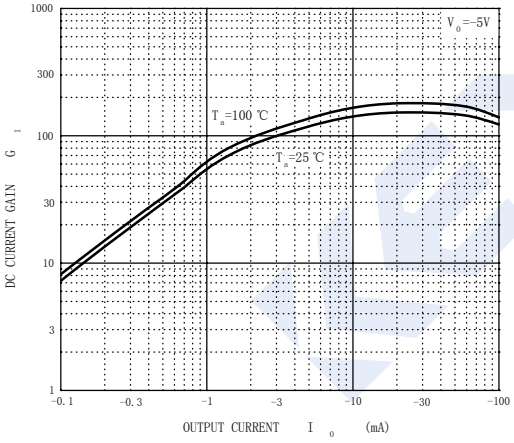
ON Characteristics



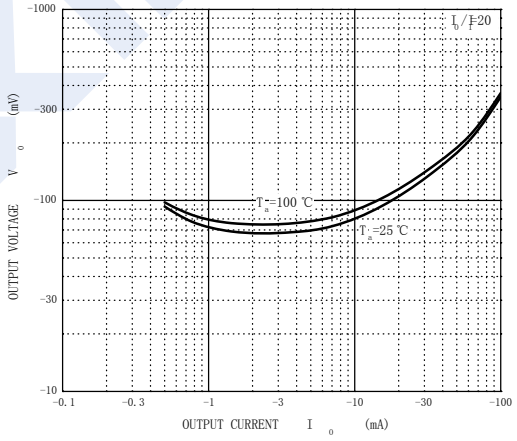
OFF Characteristics



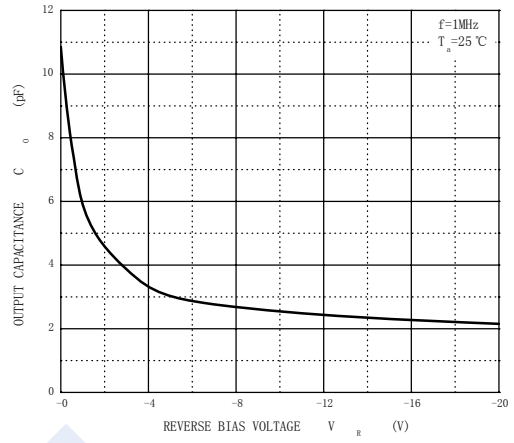
G_I — I_O



$V_{O(ON)}$ — I_O



C_O — V_R



P_D — T_a