JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

Digital transistors (built-in resistors)

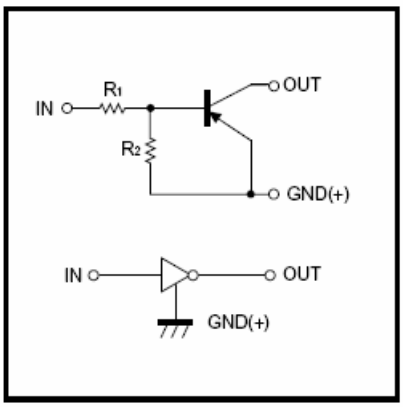
DTA123JE/DTA123JUA
DTA123JKA/DTA123JCA / DTA123JSA

DIGITAL TRANSISTOR (PNP)

FEATURES

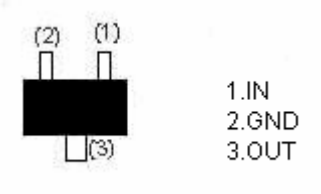
1) Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
2) The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input. They also have the advantage of almost completely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

●Equivalent circuit



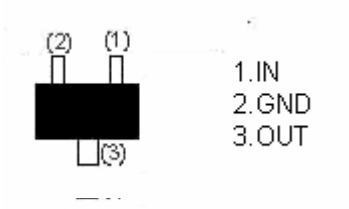
PIN CONNENCTIONS AND MARKING

DTA123JE



SOT-523 Addreviated symbol: E32

DTA123JUA



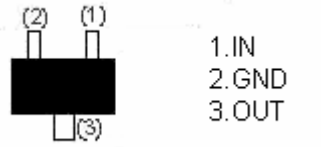
SOT-323 Addreviated symbol: 132

DTA123JKA

SOT-23-3L

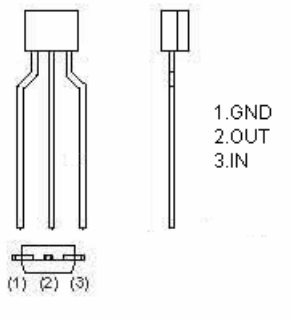
Addreviated symbol: E32

DTA123JCA



SOT-23 Addreviated symbol: E32

DTA123JSA



TO-92S

Absolute maximum ratings(Ta=25℃)

Parameter	Symbol	Limits (DTA123J□)					Unit
		E	UA	KA	CA	SA	
Supply voltage	V_{CC}	-50					V
Input voltage	V_{IN}	-12~+5					V
Output current	I_O	-100					mA
	$I_{C(MAX)}$	-100					
Power dissipation	P_d	150	200			300	mW
Junction temperature	T_j	150					℃
Storage temperature	T_{stg}	-55~150					℃

Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Input voltage	$V_{I(off)}$	-0.5			V	V_{CC}=-5V, I_O=-100μA
	$V_{I(on)}$			-1.1		V_O=-0.3V, I_O=-5mA
Output voltage	$V_{O(on)}$		-0.1	-0.3	V	I_O/I_I=-5mA/-0.25mA
Input current	I_I			-3.6	mA	V_I=-5V
Output current	$I_{O(off)}$			-0.5	μA	V_{CC}=-50V, V_I=0
DC current gain	G_I	80				V_O=-5V, I_O=-10mA
Input resistance	R_1	1.54	2.2	2.86	KΩ	-
Resistance ratio	R_2/R_1	17	21	26		-
Transition frequency	f_T		250		MHz	V_O=-10V, I_O=-5mA, f=100MHz