

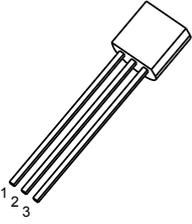
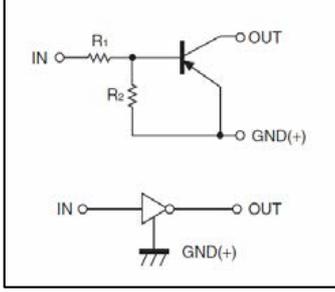
Digital Transistors (Built-in Resistors)

DTA113ZVA DIGITAL TRANSISTOR (PNP)

FEATURE

- 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

PIN CONNENCTIONS , MARKING and EQUIVALENT CIRCUIT

<p>DTA113ZVA TO-92</p>  <p>1. GND 2. OUT 3. IN</p>	<p style="text-align: center;">MARKING</p> <div style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>A 1 1 3 Z XXX</p> </div> <p>A113Z=Device code XXX=Code GXX=Green molding compound device CXX=Normal molding compound device</p>	<p style="text-align: center;">Equivalent Circuit</p> 
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ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
DTA113ZVA	TO-92	Bulk	1000pcs/Bag
DTA113ZVA-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

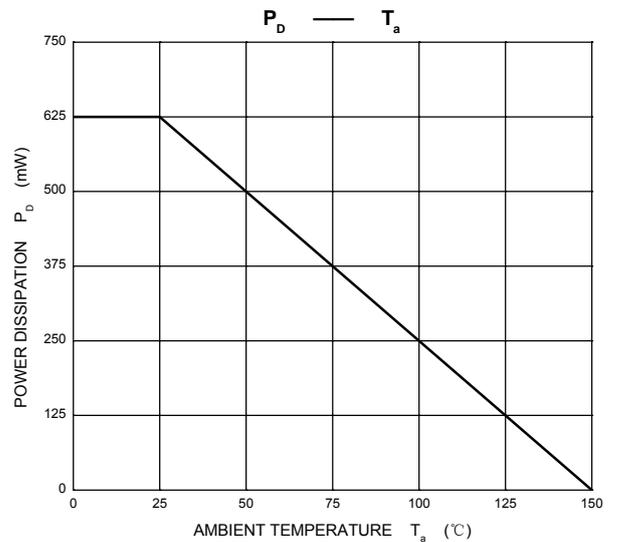
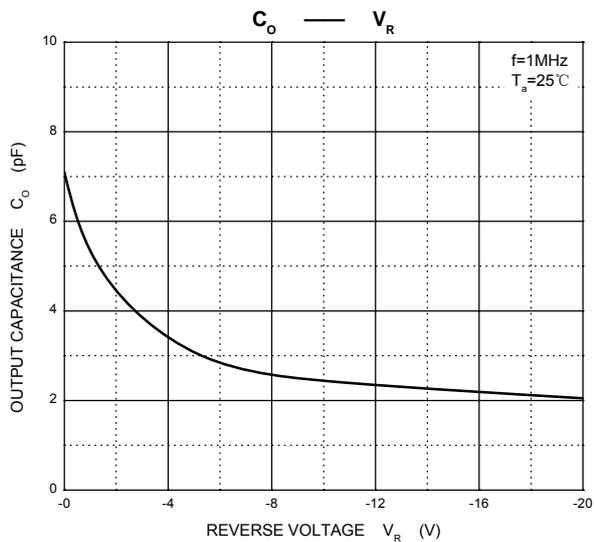
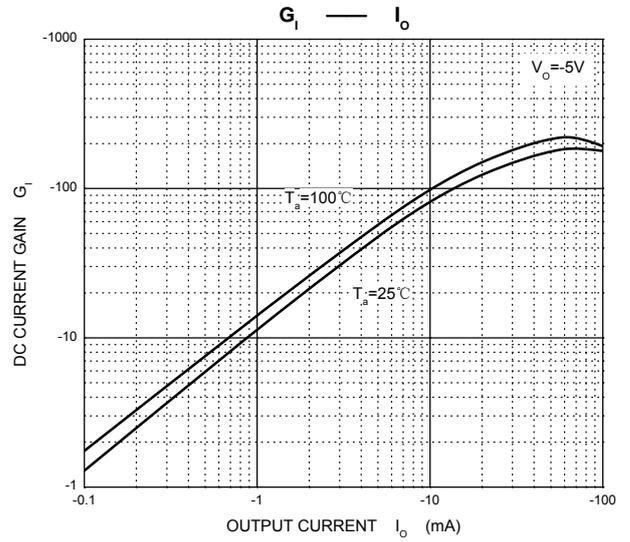
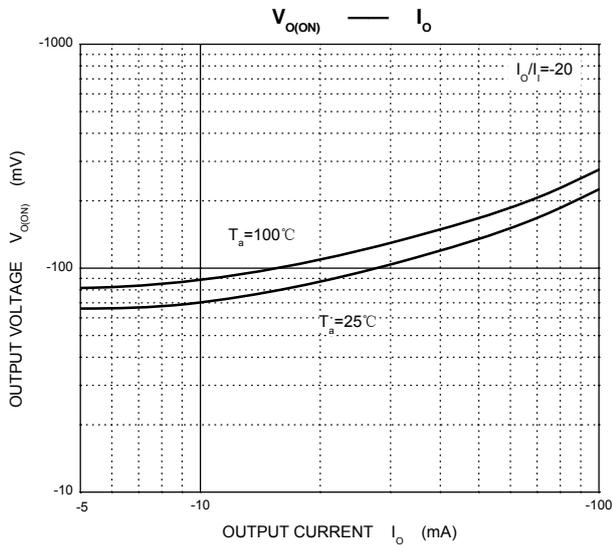
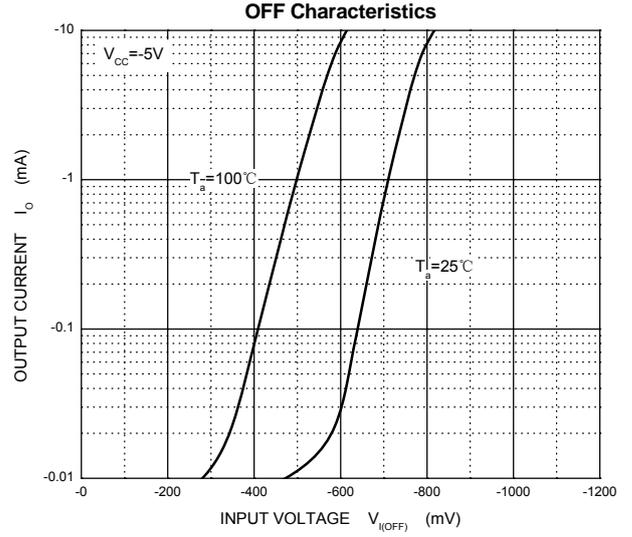
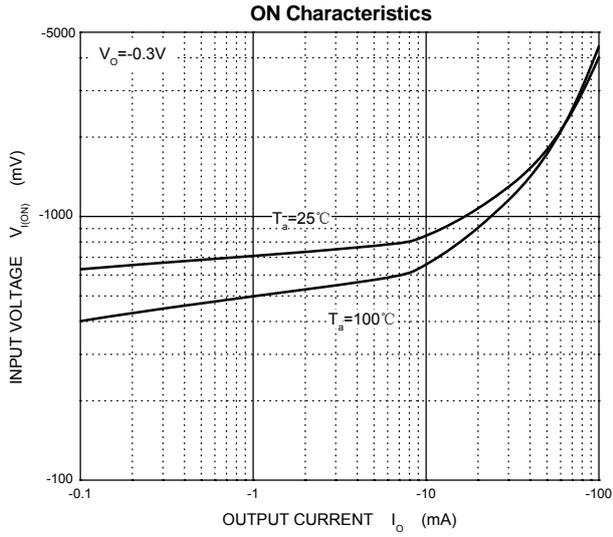
Symbol	Parameter	Limit	Unit
V _{CC}	Supply Voltage	-50	V
V _{IN}	Input Voltage	-10~+5	V
I _O	Output Current	-100	mA
P _D	Power Dissipation	625	mW
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS

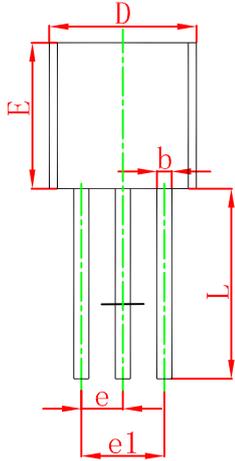
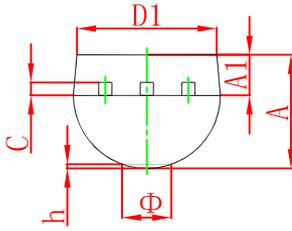
$T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(\text{off})}$	$V_{CC}=-5\text{V}, I_O=-100\mu\text{A}$	-0.3			V
	$V_{I(\text{on})}$	$V_O=-0.3\text{V}, I_O=-20\text{mA}$			-3	V
Output voltage	$V_{O(\text{on})}$	$I_O/I_I=-10\text{mA}/-0.5\text{mA}$			-0.3	V
Input current	I_I	$V_I=-5\text{V}$			-7.2	mA
Output current	$I_{O(\text{off})}$	$V_{CC}=-50\text{V}, V_I=0$			-0.5	μA
DC current gain	G_I	$V_O=-5\text{V}, I_O=-5\text{mA}$	33			
Input resistance	R_1		0.7	1	1.3	k Ω
Resistance ratio	R_2/R_1		8	10	12	
Transition frequency	f_T	$V_O=-10\text{V}, I_O=-5\text{mA}, f=100\text{MHz}$		250		MHz

Typical Characteristics

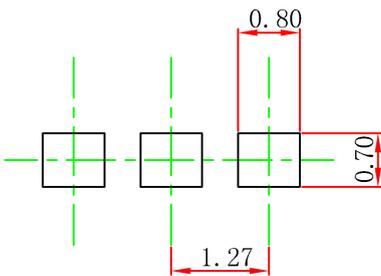


TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Suggested Pad Layout



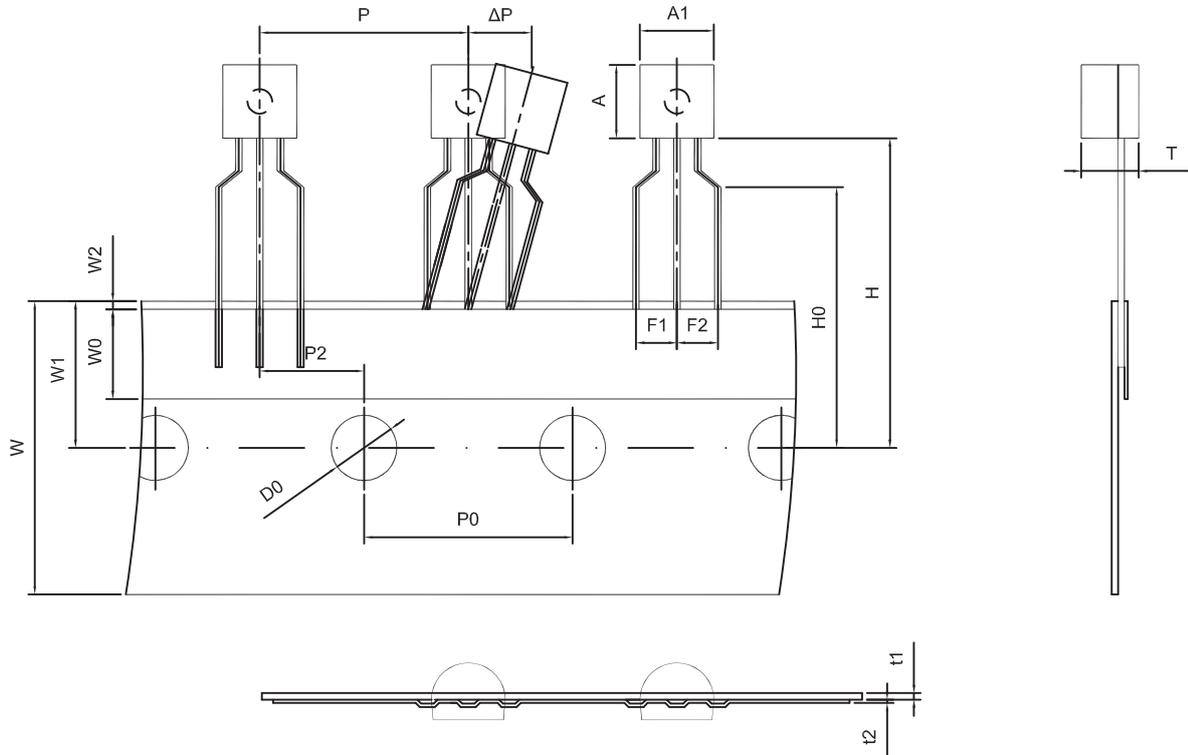
Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

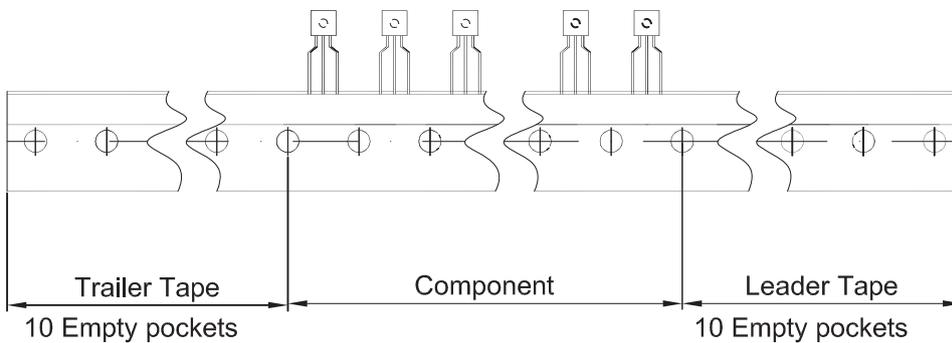
NOTICE

JSCJ reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250