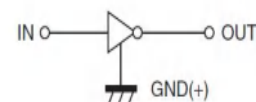
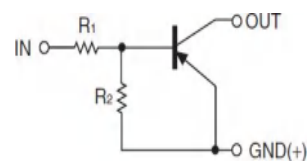




DTA114Yx Digital Transistors (Built-in Resistors)

• Equivalent Circuit

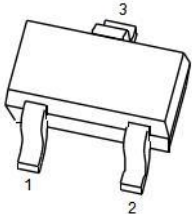
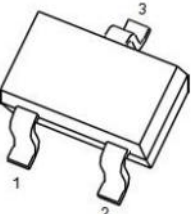
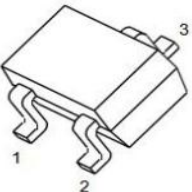
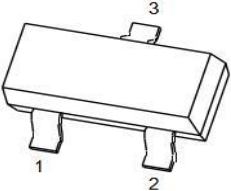
DIGITAL TRANSISTOR (PNP)



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 negative 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 and MARKING

DTA114YE  1. IN 2. GND 3. OUT	DTA114YUA  1. IN 2. GND 3. OUT
DTA114YKA  1. IN 2. GND 3. OUT	DTA114YCA  1. IN 2. GND 3. OUT

ORDERING INFORMATION

Part Number	MARKING	Package	Packing Method	Pack Quantity
DTA114YE	54	SOT-523	Reel	3000pcs/Reel
DTA114YUA	54	SOT-323	Reel	3000pcs/Reel
DTA11YKA	54	SOT-23-3L	Reel	3000pcs/Reel
DTA114YCA	54	SOT-23	Reel	3000pcs/Reel



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

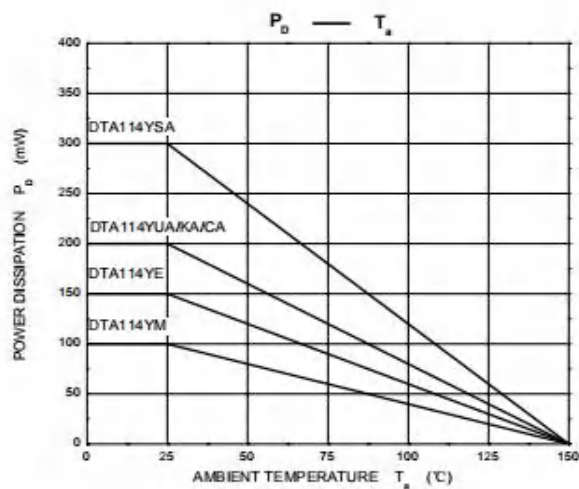
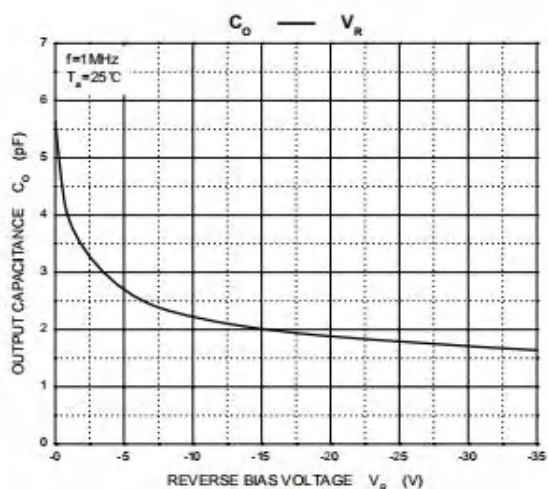
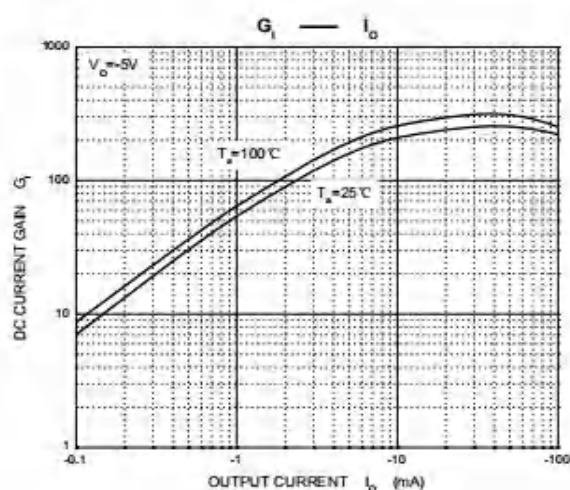
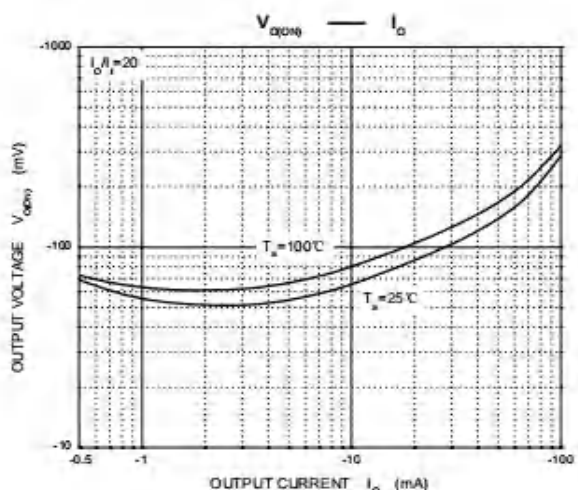
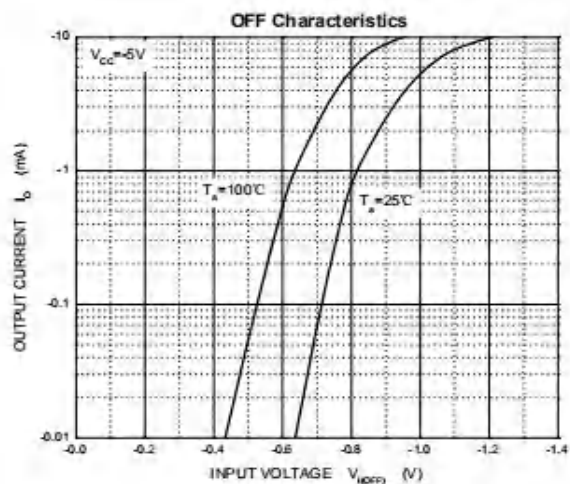
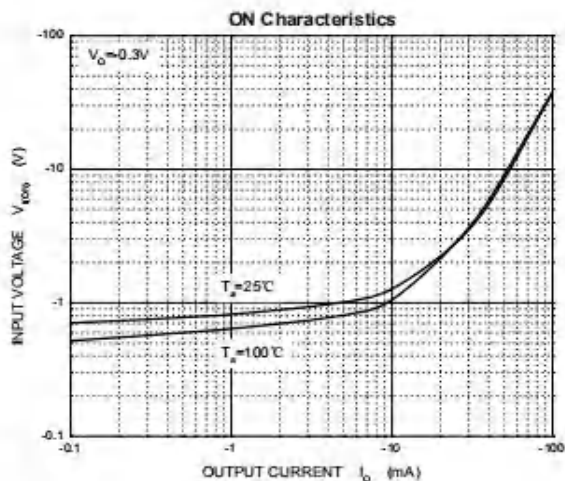
Symbol	Parameter	Limits(DTA114Y)						Unit
		M	E	UA	KA	CA	SA	
V _{CC}	Supply Voltage	-50						V
V _{IN}	Input Voltage	-40~+6						V
I _O	Output Current	-70						mA
I _{CM}	Peak Collector Current	-100						mA
P _D	Power Dissipation	100	150	200	200	200	300	mW
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150						°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	V _{I(off)}	V _{CC} =-5V, I _O =-100μA	-0.3			V
	V _{I(on)}	V _O =-0.3V, I _O =-1 mA			-1.4	V
Output voltage	V _{O(on)}	I _O /I _I =-5mA/-0.25mA			-0.3	V
Input current	I _I	V _I =-5V			-0.88	mA
Output current	I _{O(off)}	V _{CC} =-50V, V _I =0			-0.5	μA
DC current gain	G _I	V _O =-5V, I _O =-5mA	68			z
Input resistance	R ₁		7	10	13	kΩ
Resistance ratio	R ₂ /R ₁		3.7	4.7	5.7	
Transition frequency	f _T	V _O =-10V, I _O =-5mA, f=100MHz		250		MH



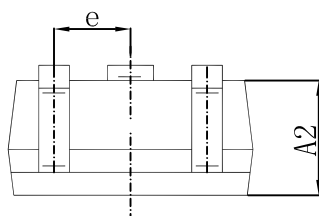
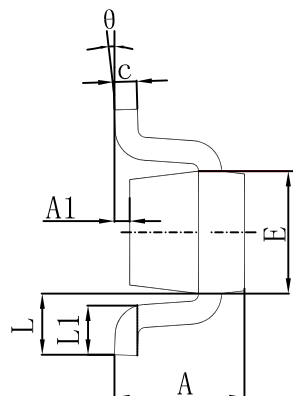
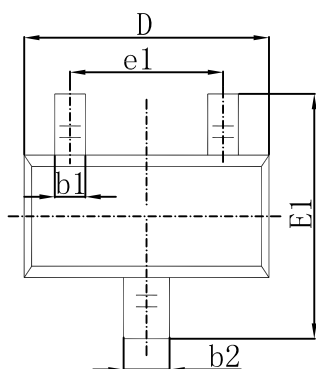
Typical Characteristics



REVERSE VOLTAGE V_R (V) AMBIENT TEMPERATURE T_a ($^\circ C$)

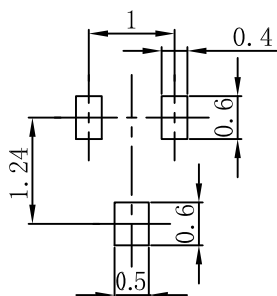


SOT-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-523 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.