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TPDTC114YUA

NPN Digital Transistor

www.sot23.com.tw

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

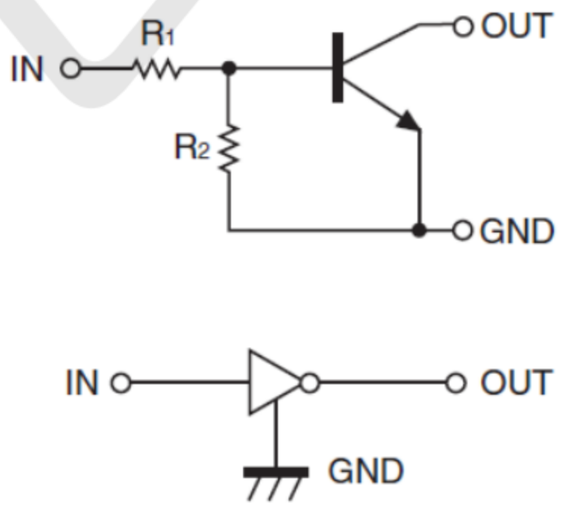
Ordering Information

- Shipping Qty:3000 /7inch Tape& Reel

SOT323



Circuit Diagram



Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

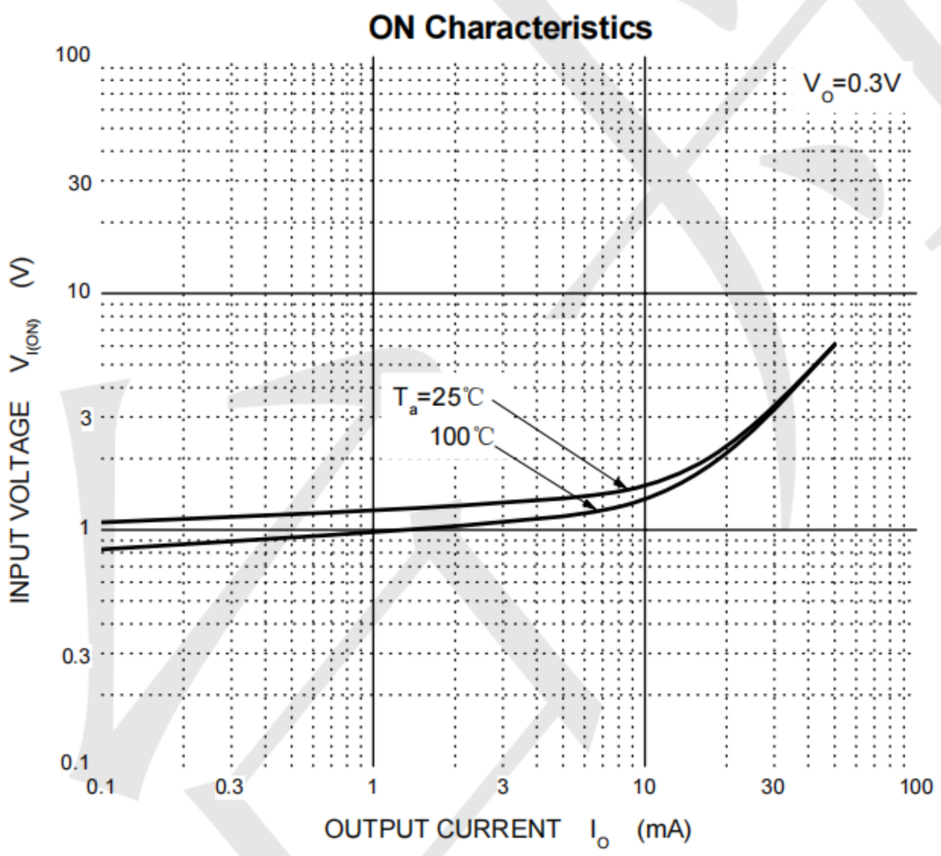
Symbol	Parameter	Value	Units
V_{CC}	Supply Voltage	50	V
V_{IN}	Input Voltage	+40 to -6	V
I_O	Output Current	70	mA
I_C(Max.)	Output current ALL	100	mA
P_D	Power Dissipation	200	mW
T_j,T_{stg}	Operating and Storage and Temperature Range	-55 to +150	℃

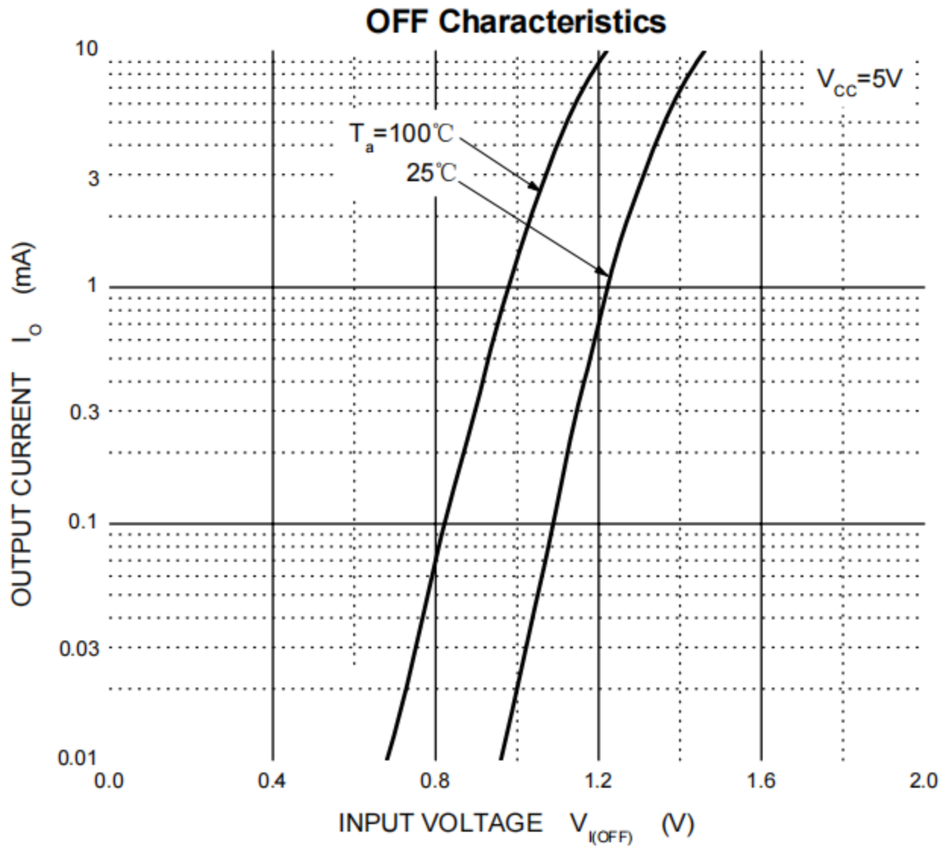
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Electrical Characteristics (TA=25°C unless otherwise specified)

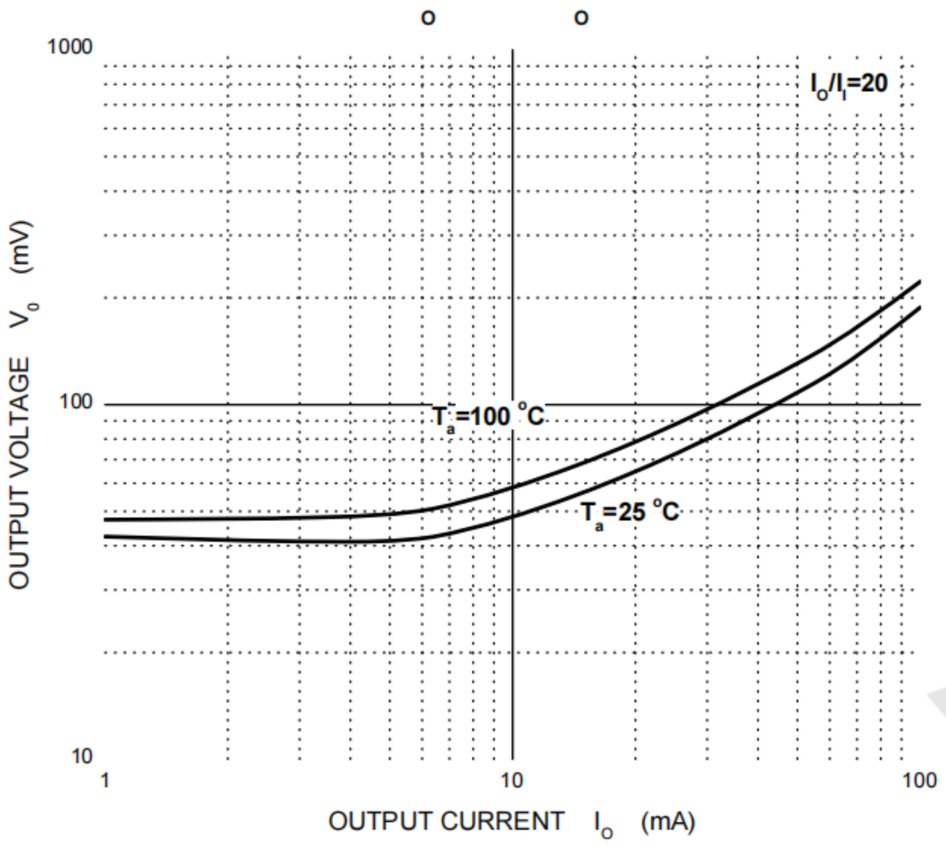
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(off)}$	V_{CC}=5V,I_O=100μA	0.3			V
	$V_{I(on)}$	V_O=0.3V,I_O=1mA			1.4	V
Output voltage	$V_{O(on)}$	I_O/I_I=5mA/0.25mA			0.3	V
Input current	I_I	V_I=5V			0.88	mA
Output current	$I_{O(off)}$	V_{CC}=50V,V_I=0			0.5	μA
DC current gain	G_I	V_O=5V,I_O=5mA	68			
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		MHz

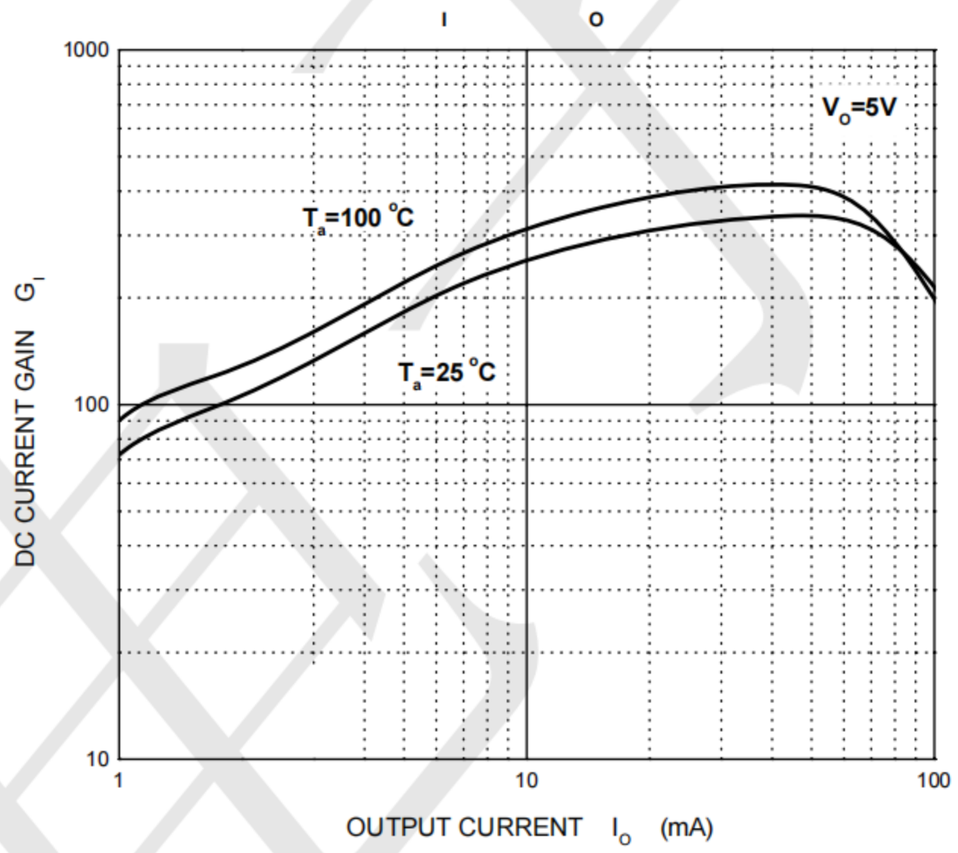
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

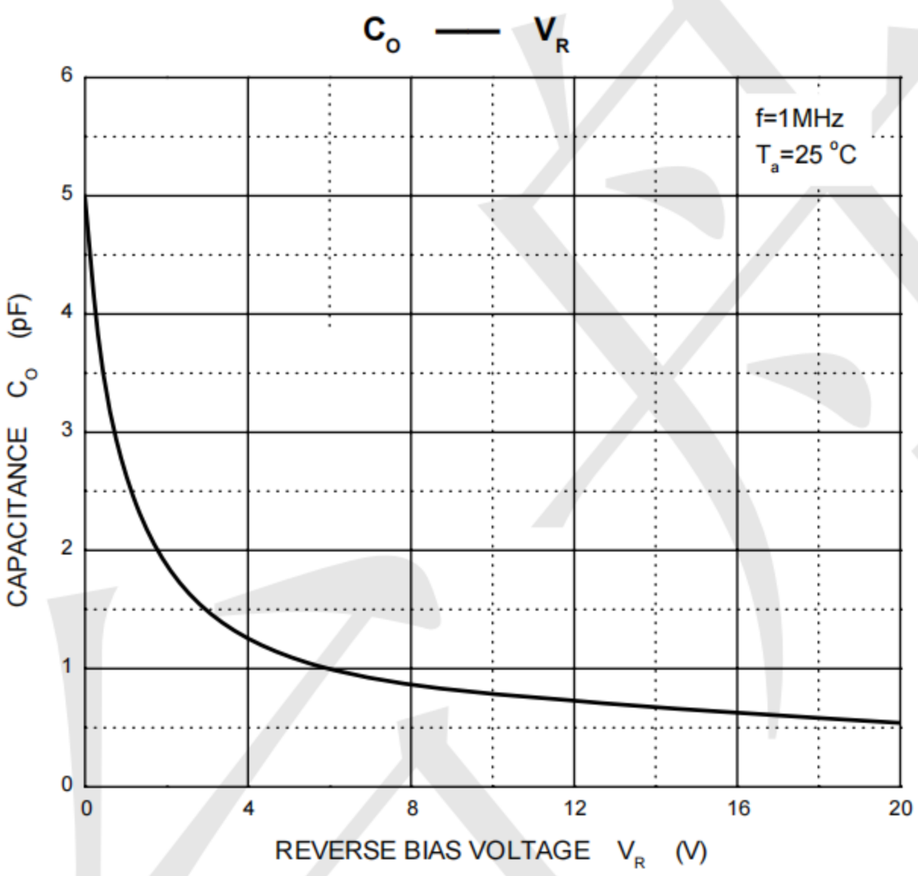


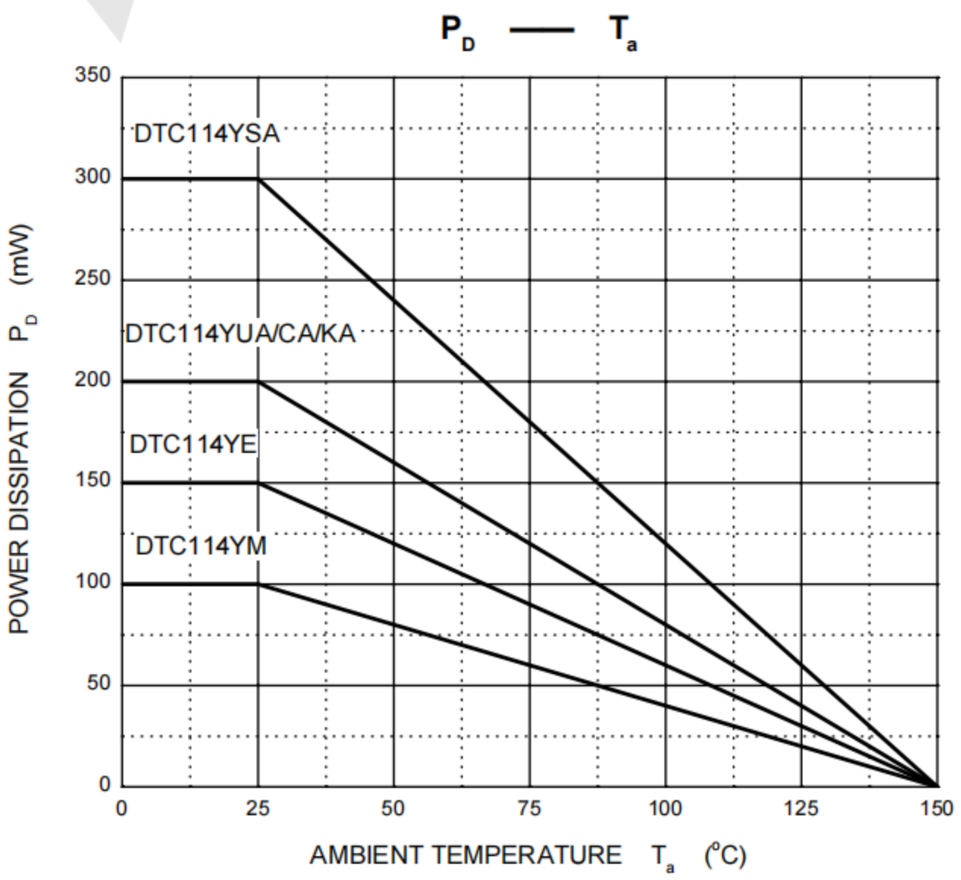


Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

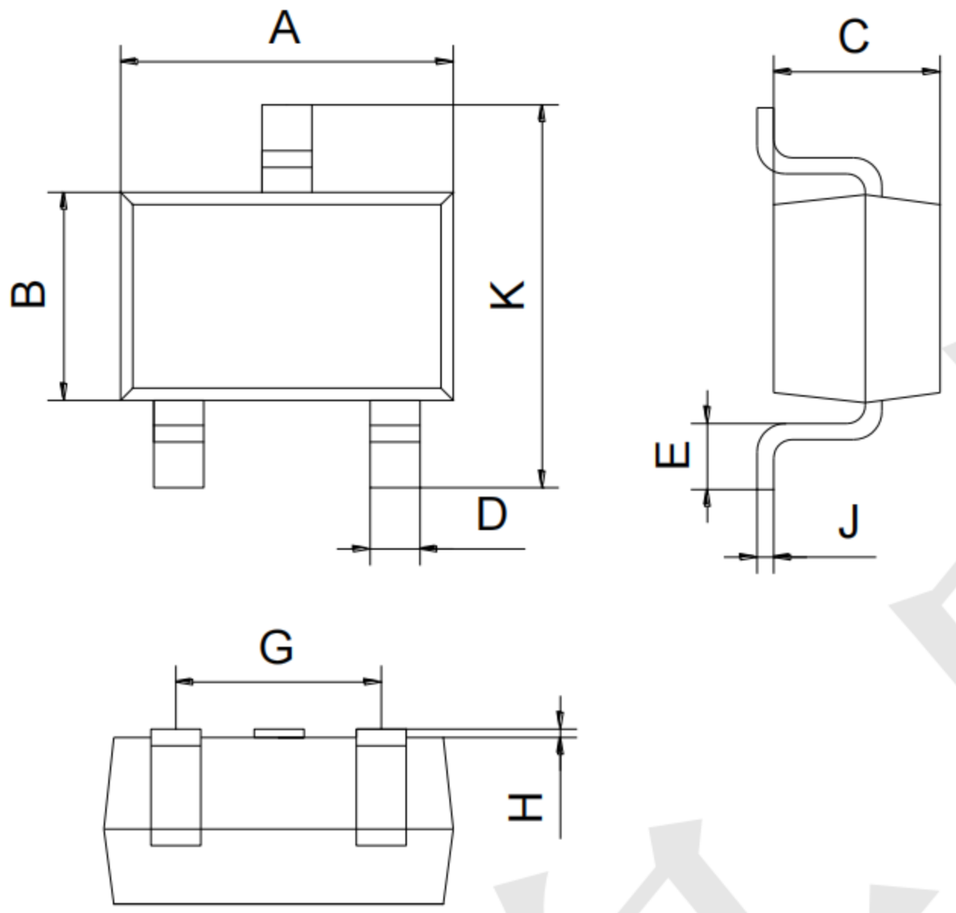








Outline Drawing - SOT323



SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40
All Dimensions in mm		

Land Pattern - SOT323

