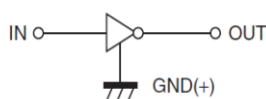
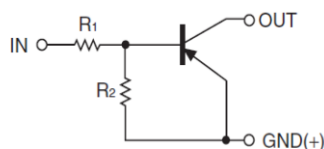


DTA143XCA Digital Transistor

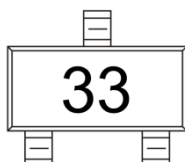
Feature

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- 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

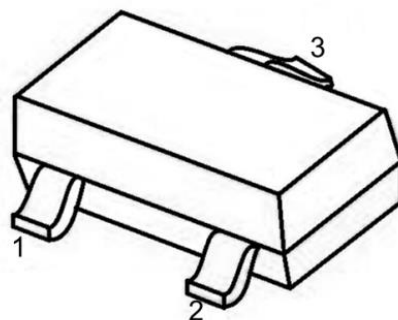
Schematic diagram



Marking:



SOT-23



1.IN 2.GND 3.OUT

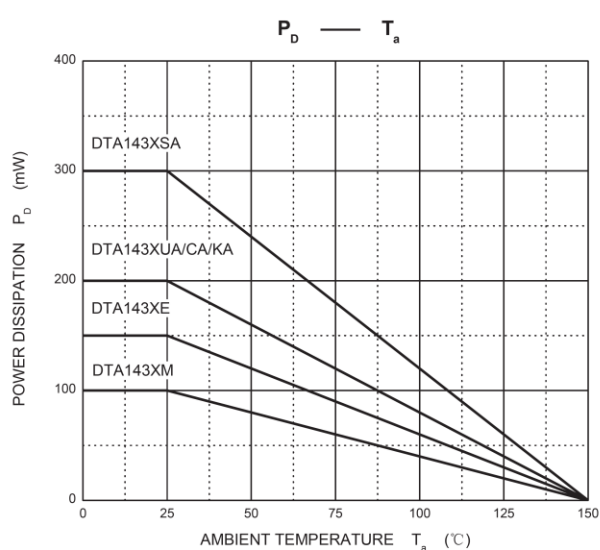
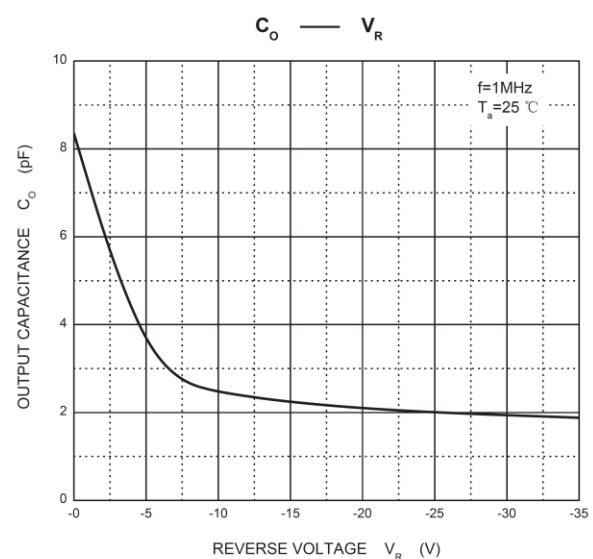
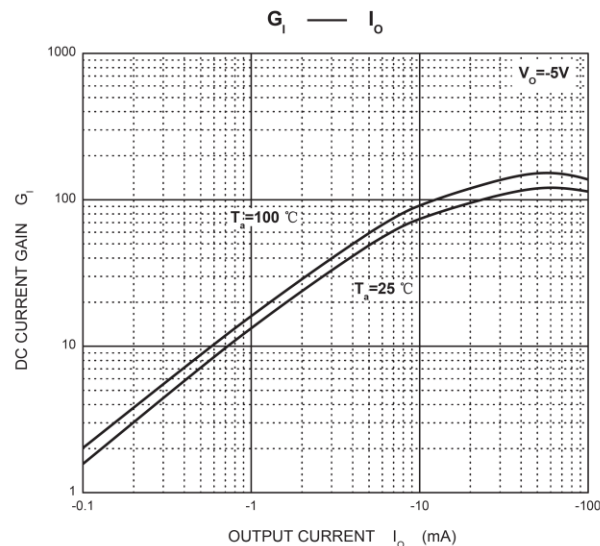
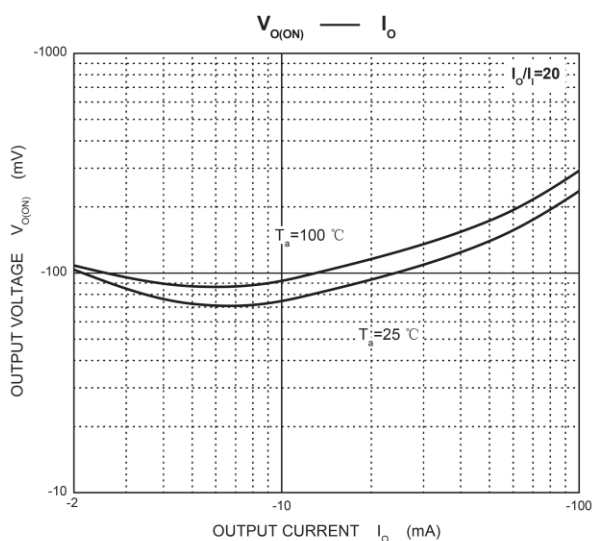
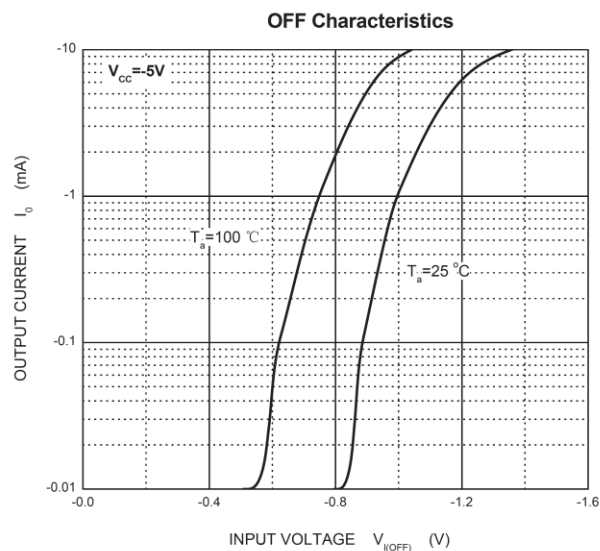
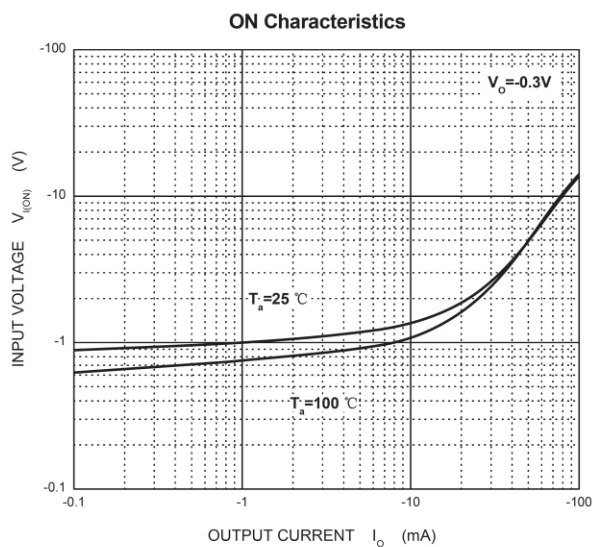
ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

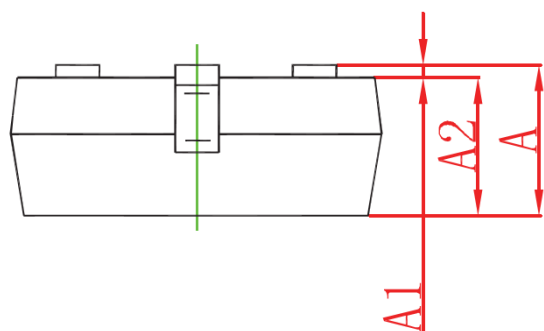
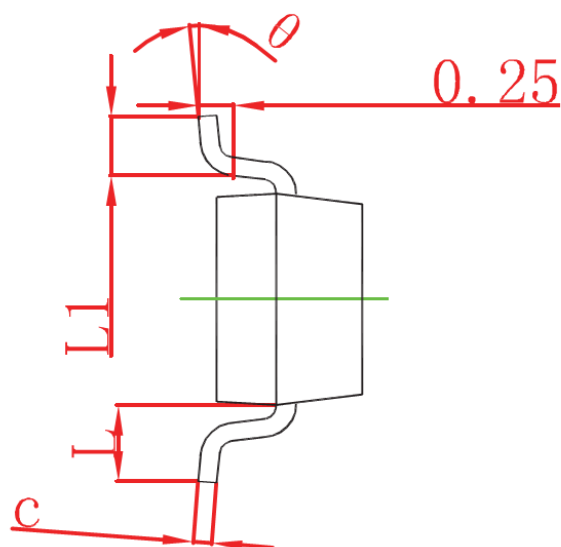
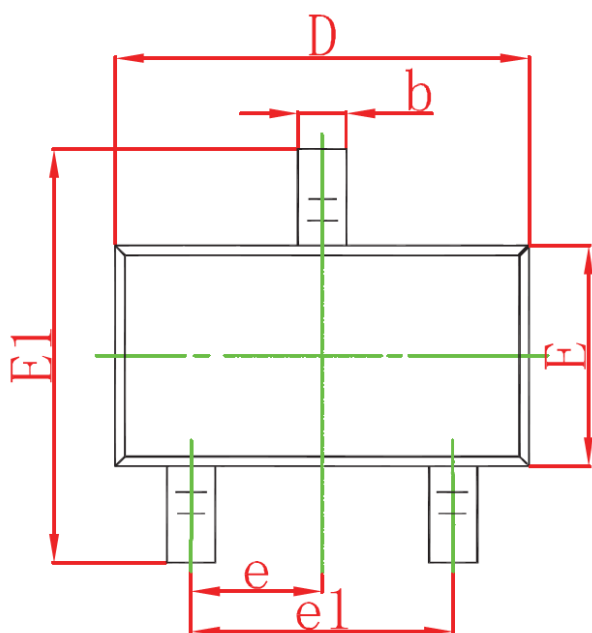
Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-20~+7	V
Output Current	I_O	-100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

Electrical Characteristics
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Input voltage	$V_{I(\text{off})}$	$V_{CC}=-5\text{V}$, $I_O=-100\mu\text{A}$	-0.3			V
	$V_{I(\text{on})}$	$V_O=-0.3\text{V}$, $I_O=-20\text{mA}$			-2.5	V
Output voltage	$V_{O(\text{on})}$	$I_O/I_I=-10\text{mA}/-0.5\text{mA}$		-0.1	-0.3	V
Input current	I_I	$V_I=-5\text{V}$			-1.8	μA
Output current	$I_{O(\text{off})}$	$V_{CC}=-50\text{V}$, $V_I=0\text{V}$			-0.5	V
DC current gain	G_I	$V_O=-5\text{V}$, $I_O=-10\text{mA}$	30			
Input resistance	R_1		3.29	4.7	6.11	$\text{k}\Omega$
Resistance ratio	R_2/R_1		1.7	2.1	2.6	
Transition frequency	f_T	$V_O=-10\text{V}$, $I_O=-5\text{mA}$, $f=1\text{MHz}$		250		MHz

Typical Characteristics

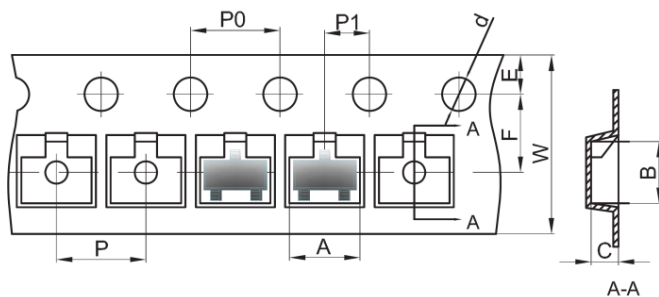


SOT-23 Package Information


Symbol	Dimensions In Millimeters	
	Min	Max
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°

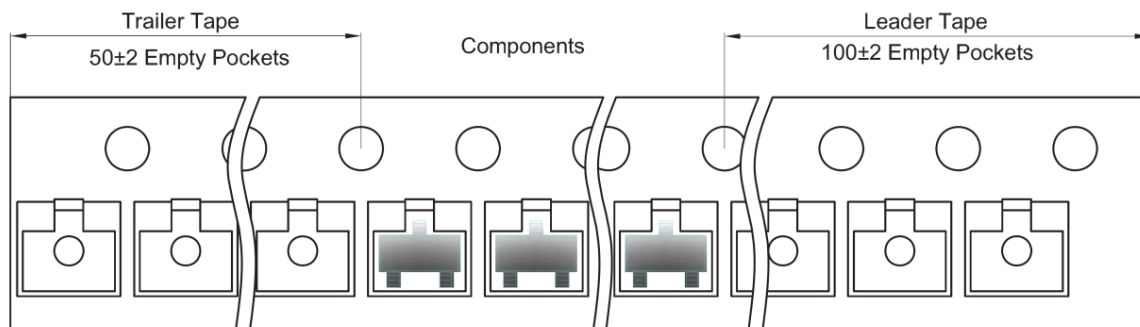
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

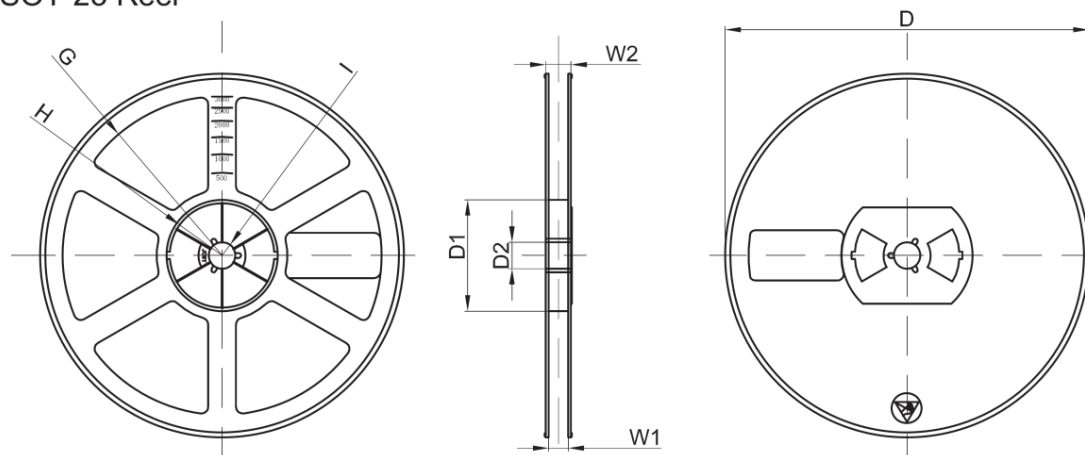


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	