RoHS
COMPLIANT

# Digital Transistors (Built-in Resistors)

1. IN
2. GND
3. OUT

SOT-323
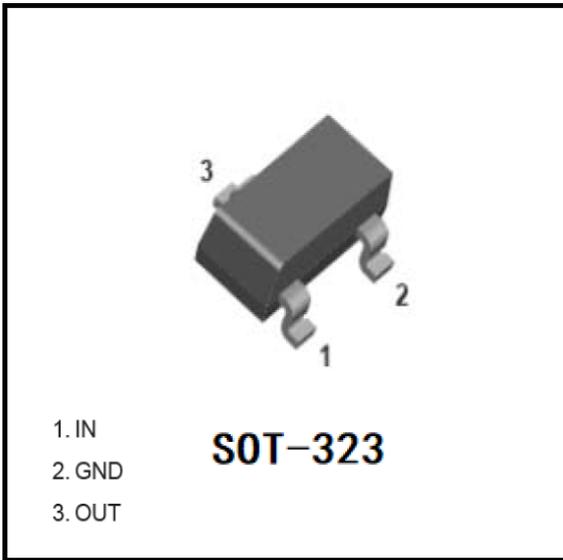
Features
● Epoxy meets UL-94 V-0 flammability rating
● Moisture Sensitivity Level 1
● Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
● Surface mount package ideally Suited for Automatic Insertion
● PNP

Mechanical Data
● **Package:** SOT-323
● **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
● **Marking:** 33

■Equivalent circuit
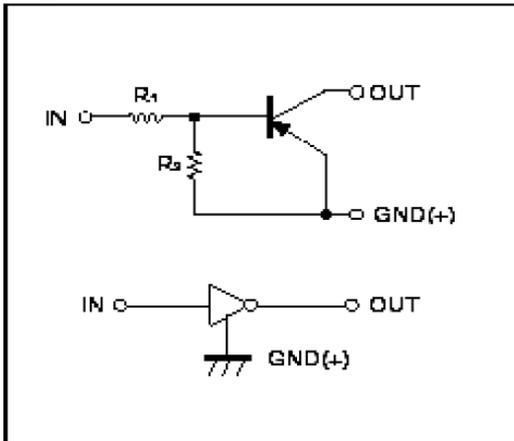
■Maximum Ratings (Ta=25℃ Unless otherwise specified）

ITEM	SYMBOL	UNIT	CONDITIONS	VALUE
Supply Voltage	VCC	V		-50
Input Voltage	VIN	V		-20 to +7
Output Current	IO	mA		-100
Power Dissipation	PD	mW		200
Junction Temperature	Tj	℃		150
Storage Temperature	TSTG	℃		-55 to +150

1 / 4

DTA143XUA

■**Electrical Characteristics** (Ta=25℃ unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$VI_{(off)}$	V	VCC=-5V,Ic=-100uA	-0.3		
	$VI_{(on)}$	V	Vo=-0.3V,Ic=-20mA			-2.5
Output voltage	$Vo_{(on)}$	V	Io /Ii =-10mA/-0.5 mA			-0.3
Input current	II	mA	VI=-5V			-1.8
Output current	$I_{O(off)}$	uA	VCC=-50V, Vi=0			-0.5
DC current gain	GI		Vo=-5V, Io =-10mA	30		
Input resistance	R_1	kΩ		3.29	4.7	6.11
Resistance ratio	R_2/R_1			1.7	2.1	2.6
Transition frequency	fT	MHz	VCE=-10V,IE=5mA,f=100MHz		250	

■ **Ordering Information** (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DTA143XUA	F2	Approximate 0.009	3000	30000	120000	7" reel

■ **Characteristics** (Typical)

Fig. 1 - DC Current Gain Characteristics
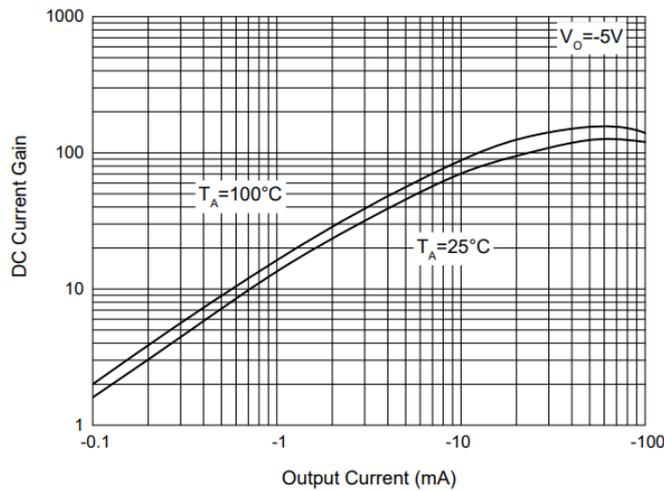
Fig. 2 - Input Voltage (on) Characteristics

Fig. 3 - Input Voltage (off) Characteristics


Fig. 3 - Input Voltage (off) Characteristics
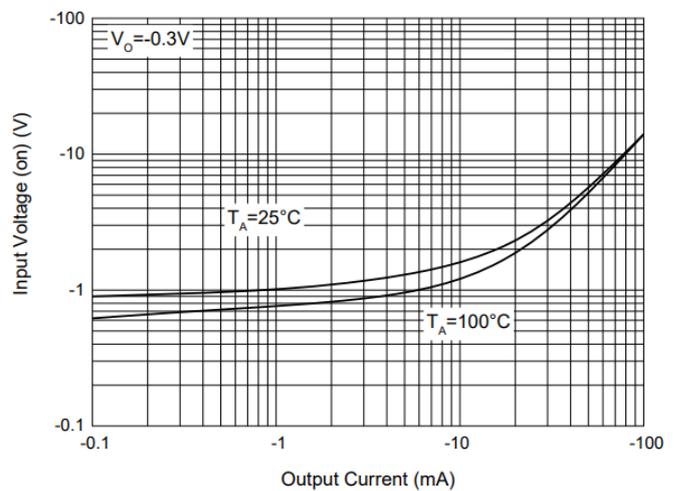
Fig. 4 - Output Voltage Characteristics
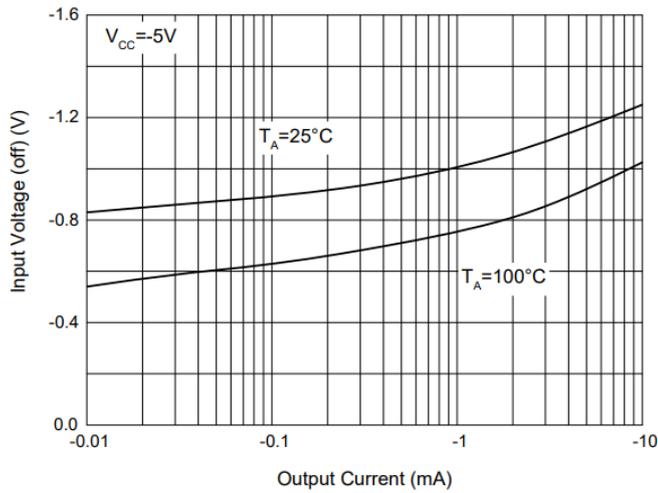
Fig. 4 - Output Voltage Characteristics
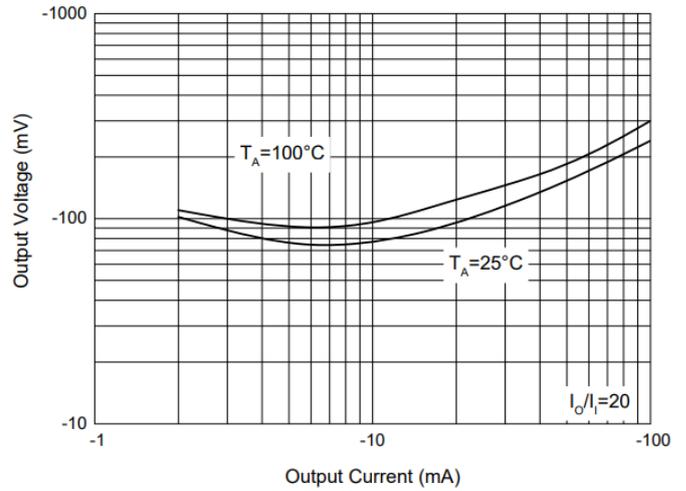
■SOT-323 Package Outline Dimensions
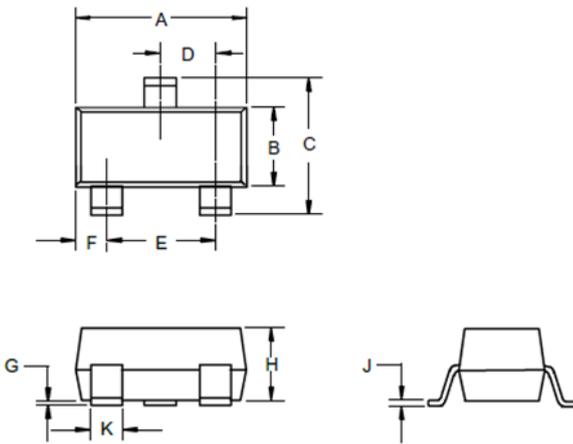
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026Nominal		0.65Nominal		
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.039	0.90	1.00	
J	0.004	0.010	0.10	0.250	
K	0.006	0.016	0.15	0.40	

■SOT-323Suggested Pad Layout

S-S3214
Rev.1.0,22-July-20

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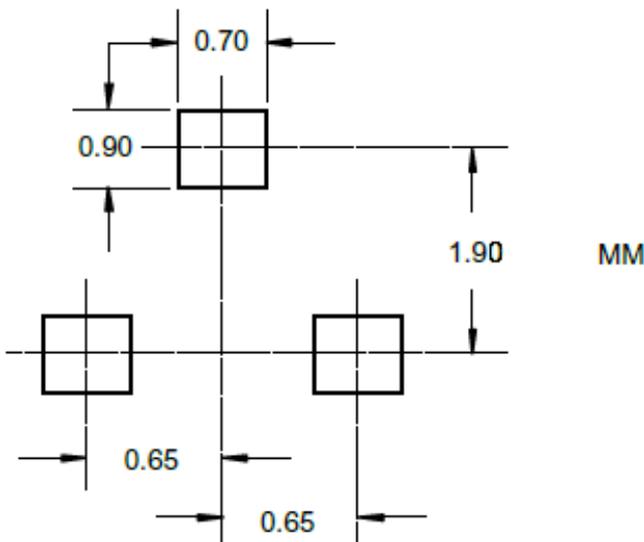
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