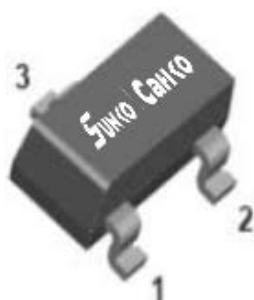


Digital Transistors (Built-in Resistors)



1. IN

2. GND

3. OUT

SOT-323

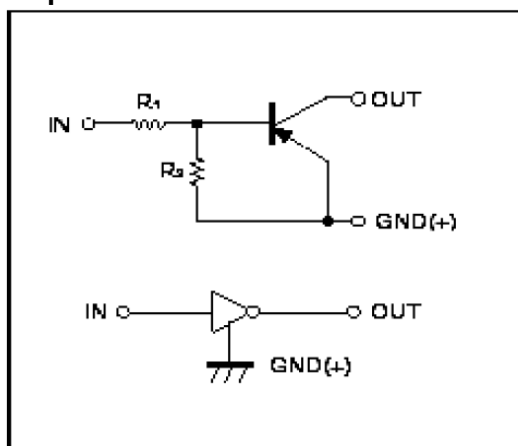
Features

- Epoxy meets UL-94 V-0 flammability rating
- 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:** 13

■Equivalent circuit



■Maximum Ratings (Ta=25°C Unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	VALUE
Supply Voltage	V_{CC}	V		-50
Input Voltage	V_{IN}	V		-30 to +10
Output Current	I_O	mA		-100
Power Dissipation	P_D	mW		200
Junction Temperature	T_j	°C		150
Storage Temperature	T_{STG}	°C		-55 to +150

DTA143EUA

■Electrical Characteristics (Ta=25°C unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	$V_{CC}=-5V, I_c=-100\mu A$	-0.5		
	$V_{I(on)}$	V	$V_o=-0.3V, I_c=-20mA$			-3
Output voltage	$V_{O(on)}$	V	$I_o/I_i=-10mA/-0.5mA$			-0.3
Input current	I_i	mA	$V_i=-5V$			-1.8
Output current	$I_{O(off)}$	uA	$V_{CC}=-50V, V_i=0$			-0.5
DC current gain	GI		$V_o=-5V, I_o=-10mA$	30		
Input resistance	R_i	kΩ		3.29	4.7	6.11
Resistance ratio	R_2/R_1			0.8	1.0	1.2
Transition frequency	f_T	MHz	$V_{CE}=-10V, I_E=5mA, f=100MHz$		250	

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DTA143EUA	F2	Approximate 0.009	3000	30000	120000	7" reel

■ Characteristics (Typical)

Fig. 1 - DC Current Gain Characteristics

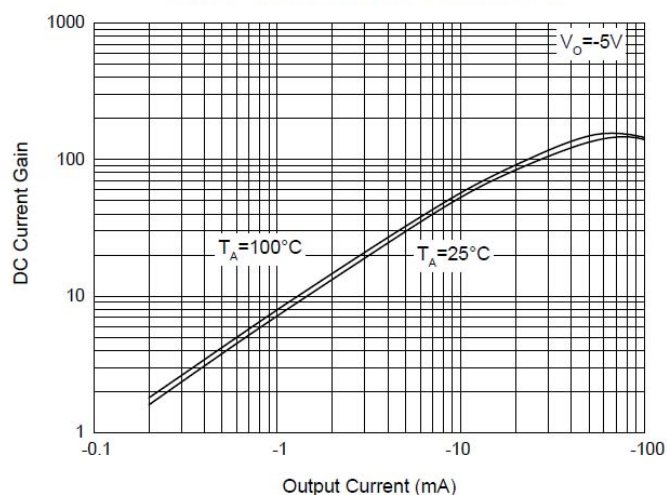


Fig. 2 - Input Voltage (on) Characteristics

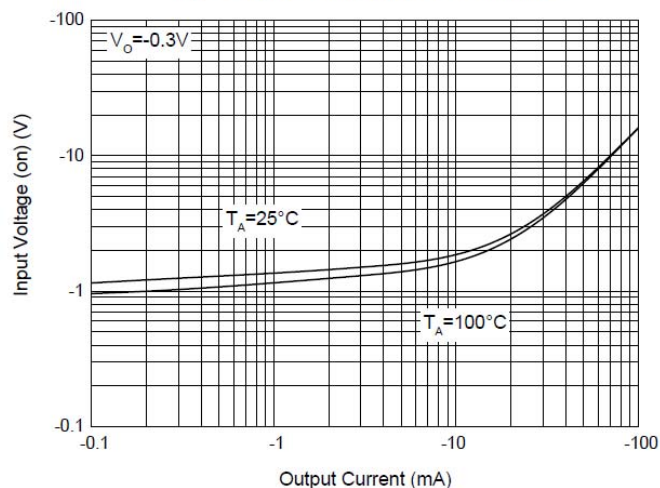


Fig. 3 - Input Voltage (off) Characteristics

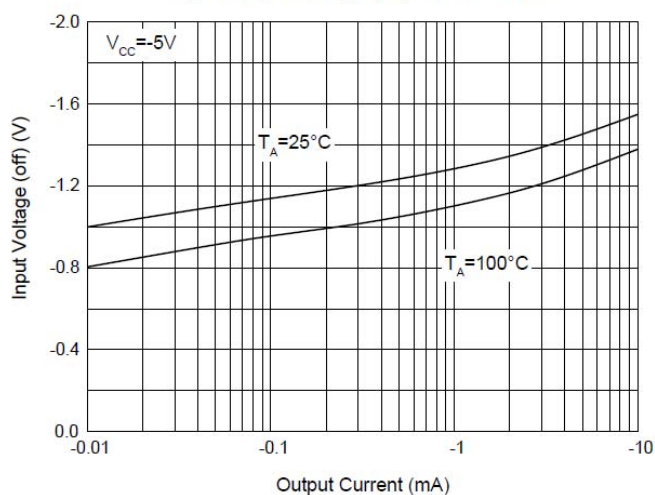
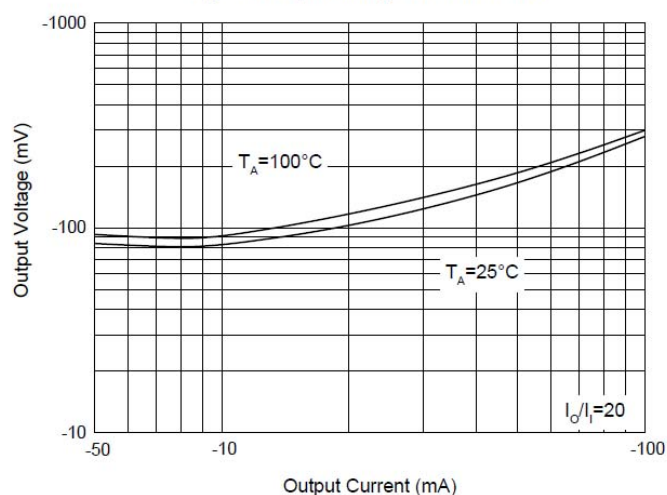
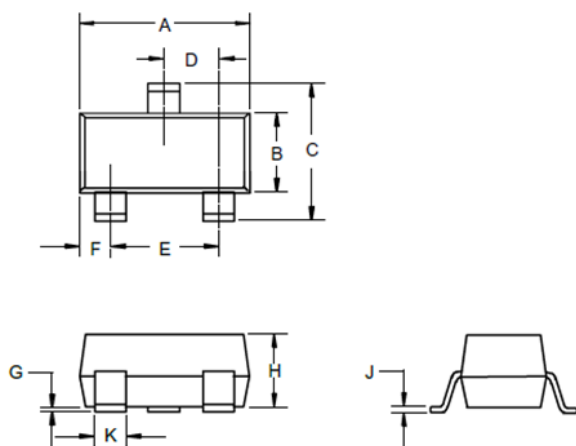


Fig. 4 - Output Voltage Characteristics

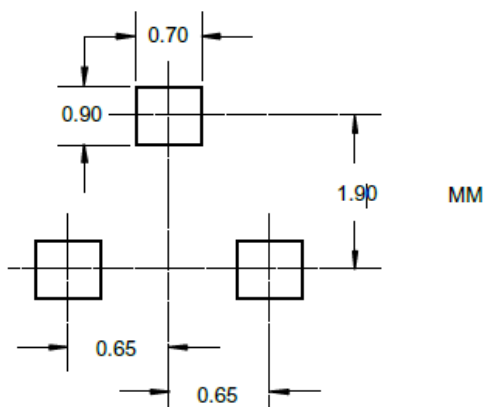


■SOT-323 Package Outline Dimensions



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

■SOT-323 Suggested Pad Layout



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