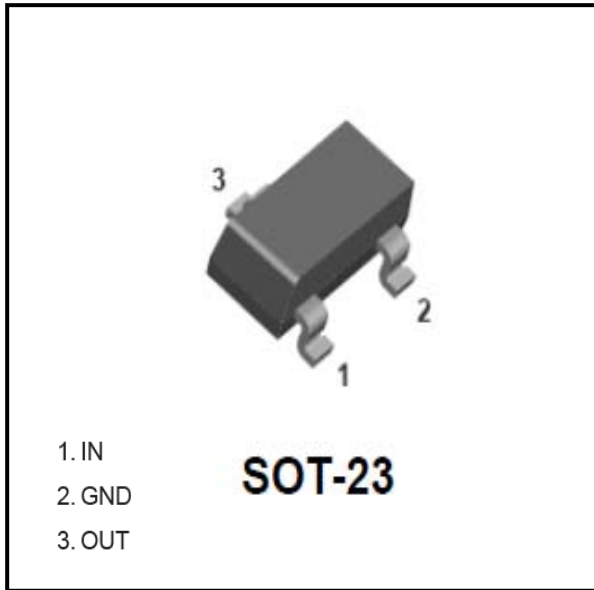


## Digital Transistors (Built-in Resistors)



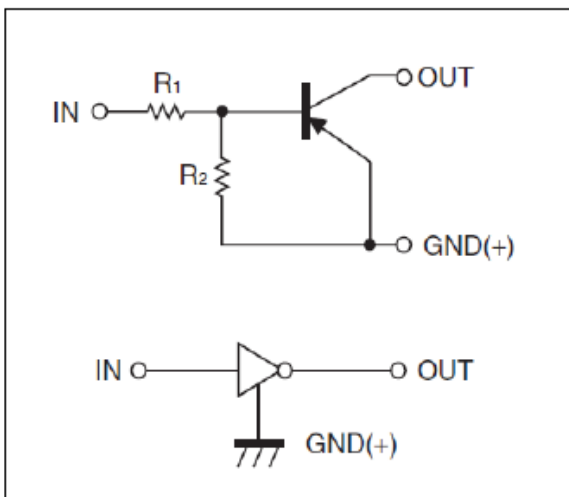
### Features

- 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-23
- **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	VALUE
Supply Voltage	$V_{CC}$	V	-50
Input Voltage	$V_{IN}$	V	-30 to +10
Output Current	$I_o$	mA	-100
Peak Collector Current	$I_{CM}$	mA	-100
Power Dissipation	$P_D$	mW	200
Junction Temperature	$T_j$	°C	150
Storage Temperature	$T_{stg}$	°C	-55 to +150



# DTA143ECA

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

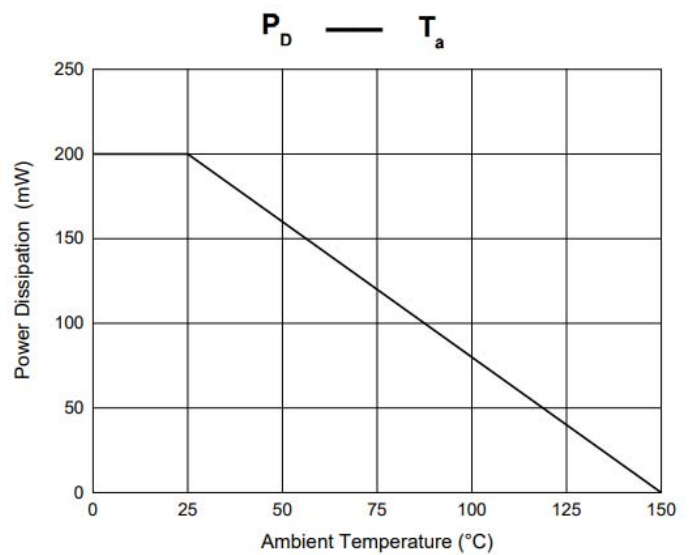
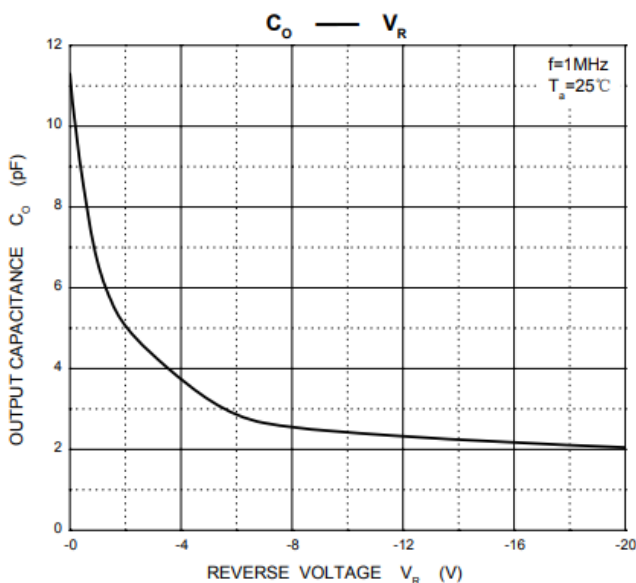
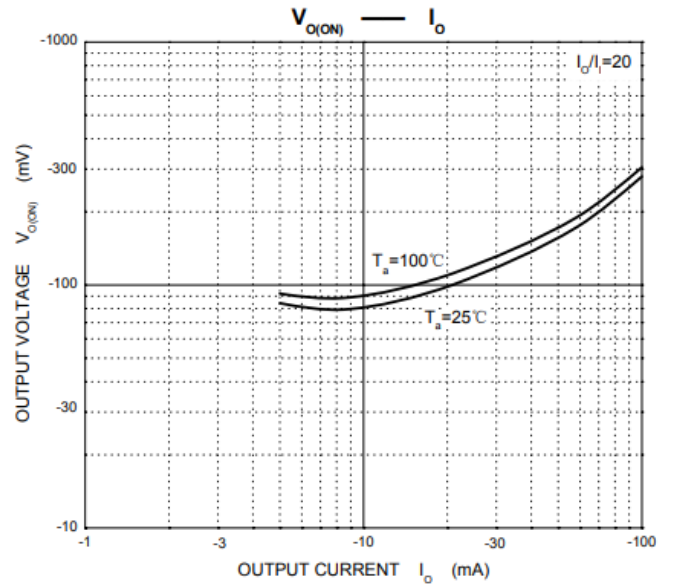
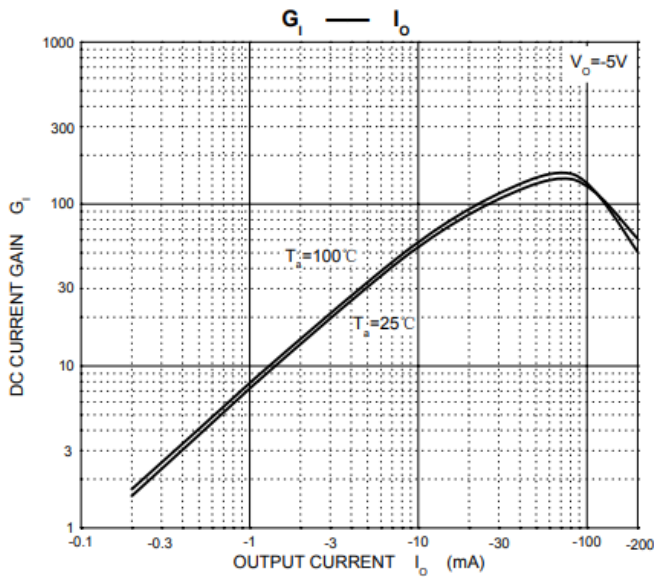
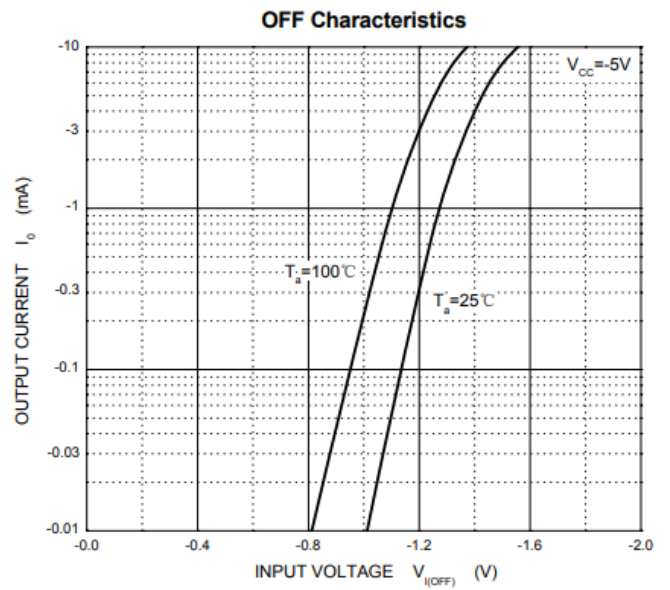
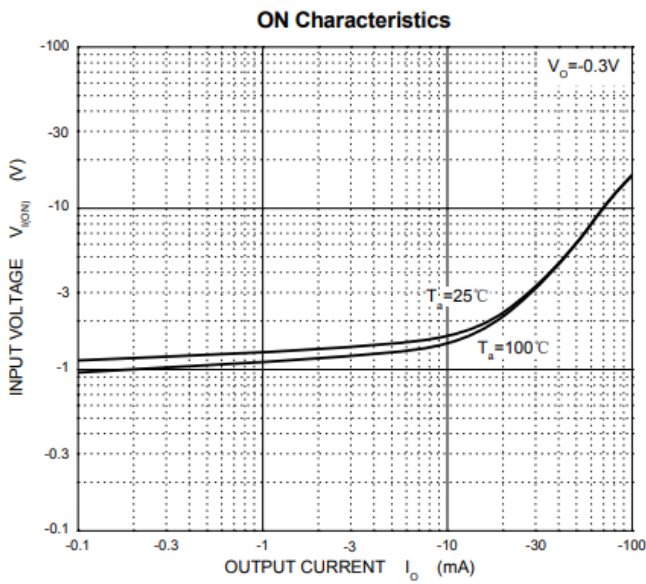
ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	VCC=-5V, I <sub>c</sub> =-100uA	-0.5		
	$V_{I(on)}$	V	V <sub>0</sub> =-0.3V, I <sub>c</sub> =-20mA			-3
Output voltage	$V_{O(on)}$	V	I <sub>o</sub> / I <sub>i</sub> = -10mA / -0.5 mA			-0.3
Input current	I <sub>i</sub>	mA	V <sub>i</sub> = -5V			-1.8
Output current	I <sub>O(off)</sub>	uA	VCC = -50V, V <sub>i</sub> = 0			-0.5
DC current gain	G <sub>I</sub>		V <sub>o</sub> = -5V, I <sub>o</sub> = -10mA	30		
Input resistance	R <sub>1</sub>	kΩ		3.29	4.7	6.11
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>			0.8	1	1.2
Transition frequency	f <sub>T</sub>	MHz	V <sub>o</sub> = -10V, I <sub>O</sub> = -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
DTA143ECA	F2	Approximate 0.009	3000	30000	120000	7" reel



## ■ Characteristics (Typical)





# DTA143ECA

## ■SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

## ■SOT-23 Suggested Pad Layout





## DTA143ECA

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