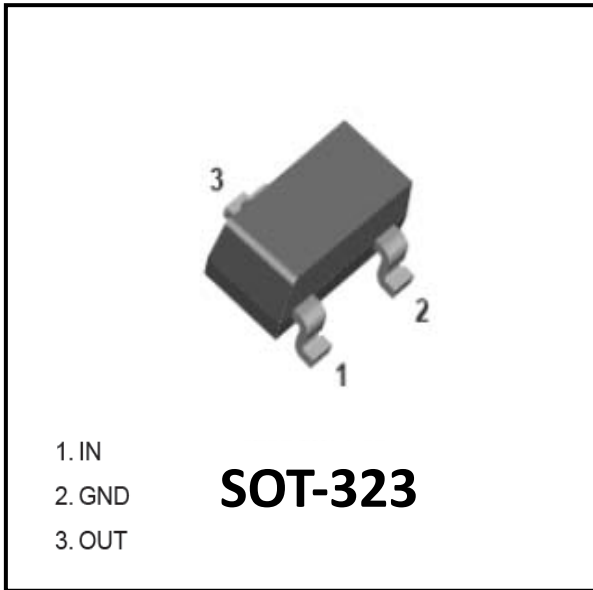


## Digital Transistors (Built-in Resistors)



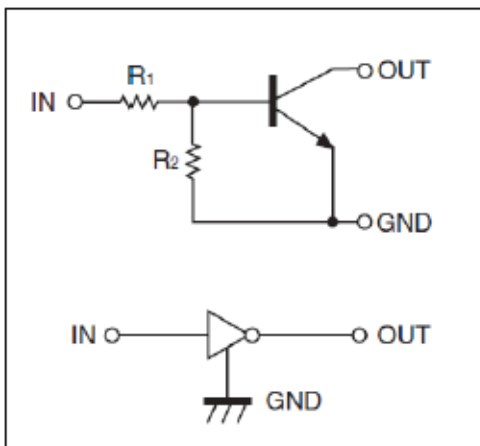
### Features

- 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
- NPN

### Mechanical Data

- **Package:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 26

### ■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		-10 to +40
Collector Current	$I_C$	mA		100
Power Dissipation	$P_D$	mW		200
Junction Temperature	$T_j$	°C		150
Storage Temperature	$T_{stg}$	°C		-55 to +150



# DTC144EUA

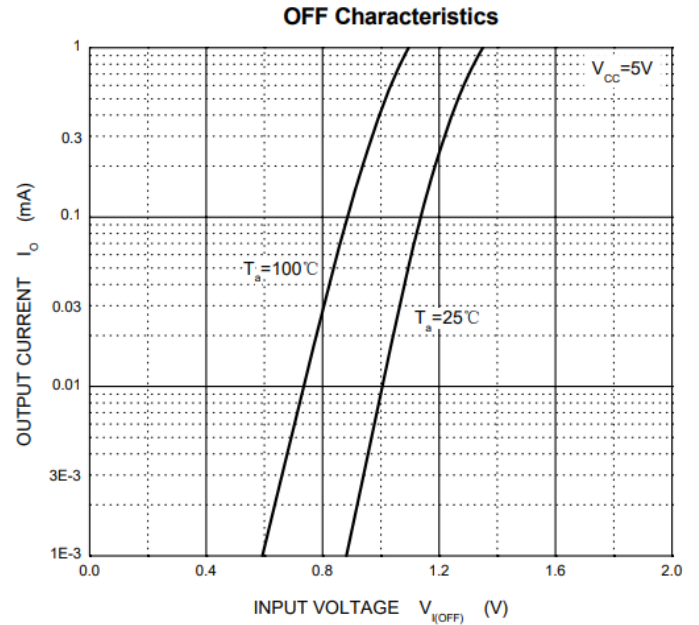
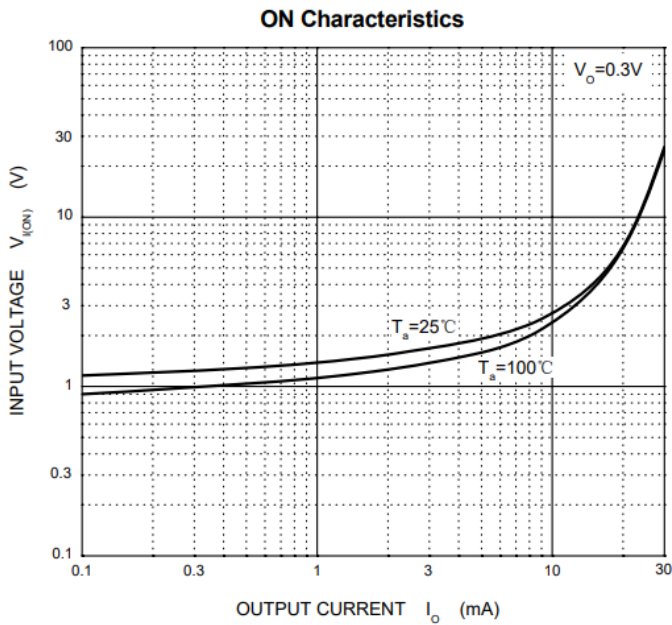
## ■ Electrical Characteristics (Ta=25°C unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	VCC=5V, I <sub>o</sub> =100uA	0.3		
	$V_{I(on)}$	V	V <sub>o</sub> =0.3V, I <sub>o</sub> =2mA			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			0.18
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> =5mA	68		
Input resistance	R <sub>1</sub>	kΩ		32.9	47	61.1
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)

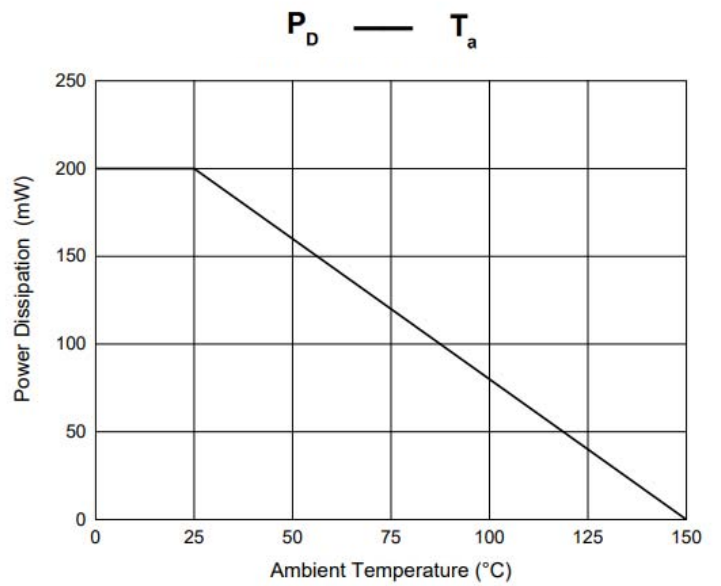
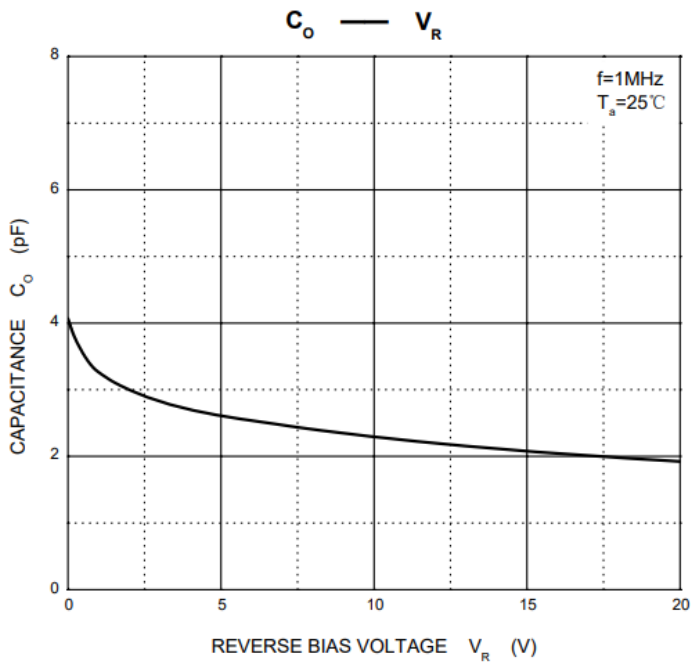
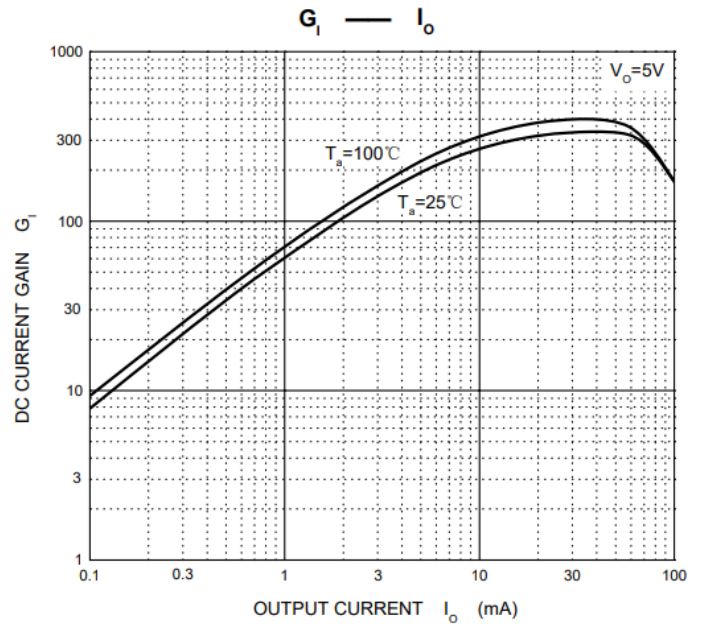
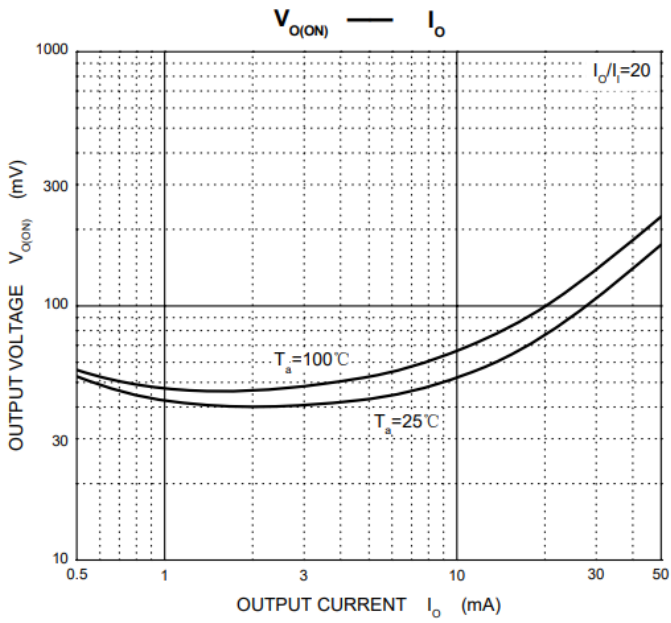
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)		INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DTC144EUA	F2	Approximate 0.005	3000		30000	120000	7" reel

## ■ Characteristics (Typical)





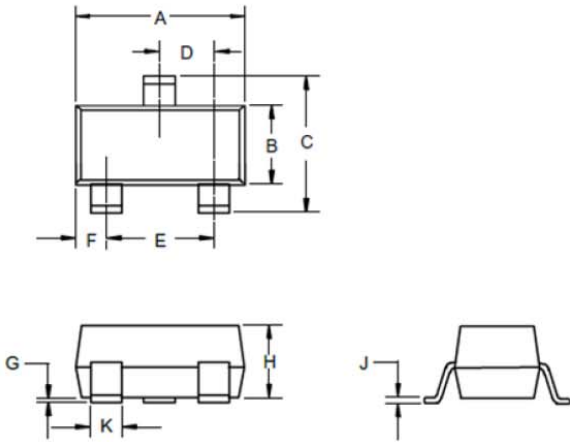
# DTC144EUA





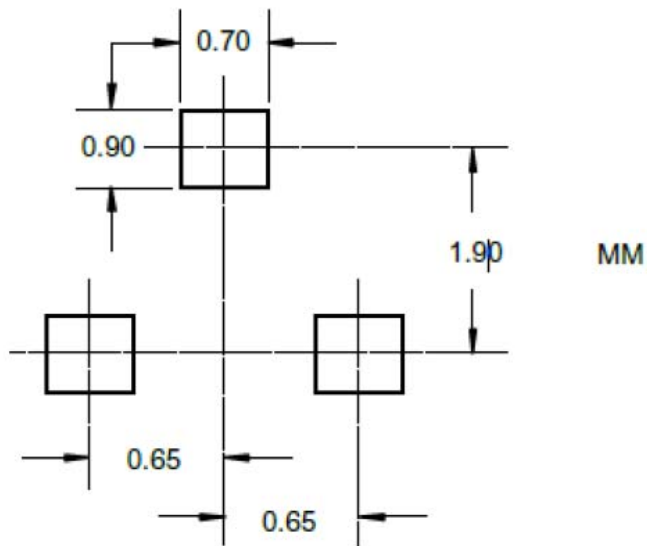
# DTC144EUA

## ■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 Soldering Footprint





## DTC144EUA

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