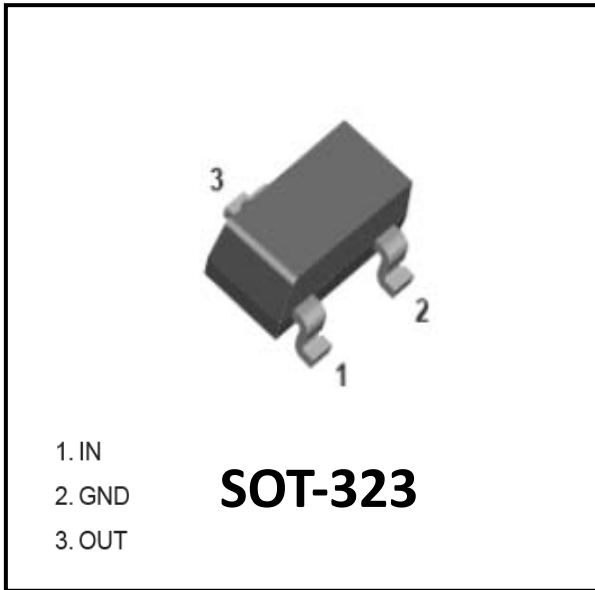


Digital Transistors (Built-in Resistors)



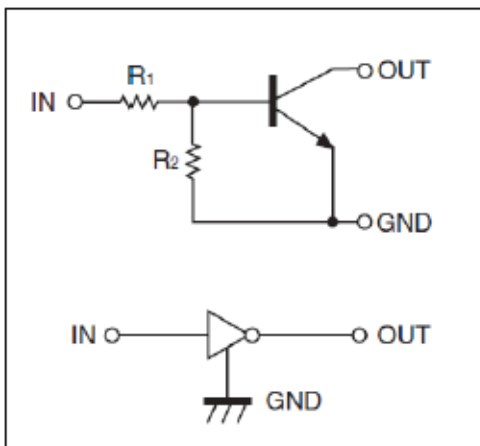
Features

- 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

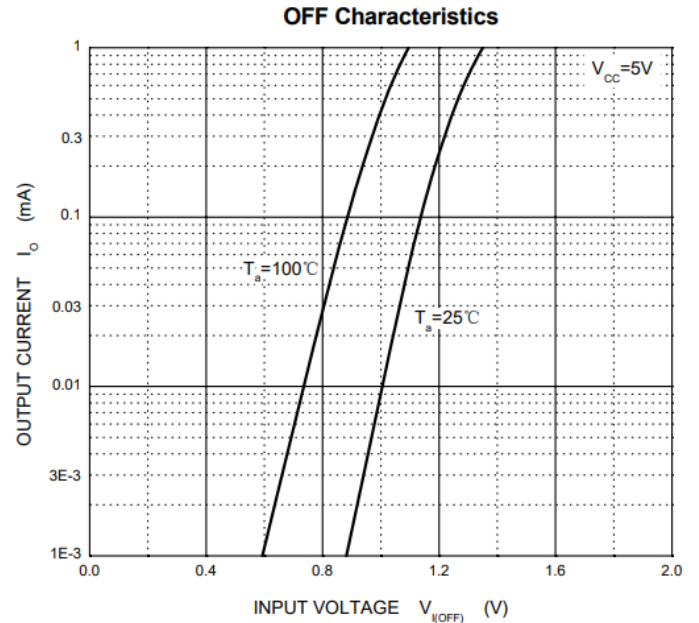
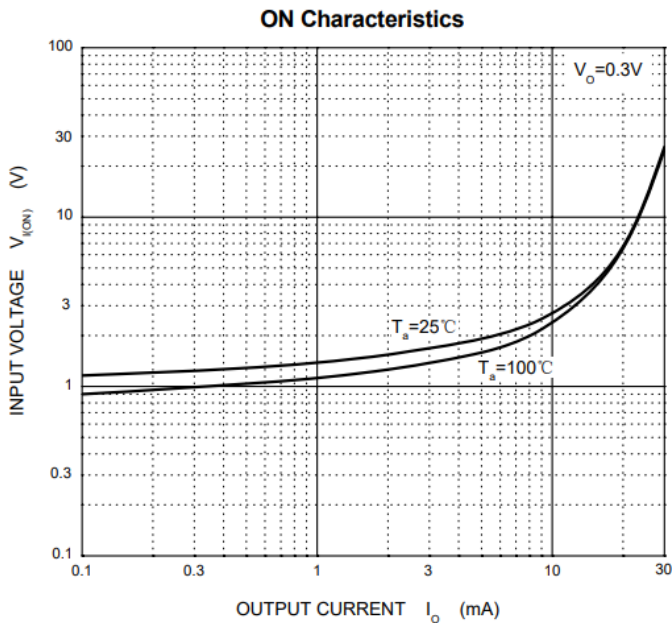
■ Electrical Characteristics (Ta=25°C unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	VCC=5V, I _o =100uA	0.5		
	$V_{I(on)}$	V	V _o =0.3V, I _o =2mA			3
Output voltage	$V_{O(on)}$	V	I _o / I _i = 10mA/0.5 mA			0.3
Input current	I _I	mA	V _I =5V			0.18
Output current	I _{O(off)}	uA	VCC=50V, V _i =0			0.5
DC current gain	G _I		V _o =5V, I _o =5mA	68		
Input resistance	R ₁	kΩ		32.9	47	61.1
Resistance ratio	R ₂ /R ₁			0.8	1	1.2
Transition frequency	f _T	MHz	V _o =10V, I _o =5mA, f=100MHz		250	

■ Ordering Information (Example)

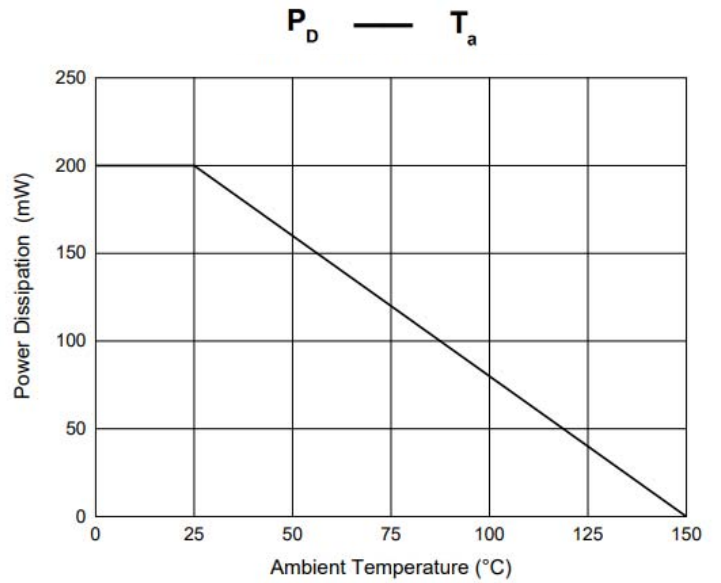
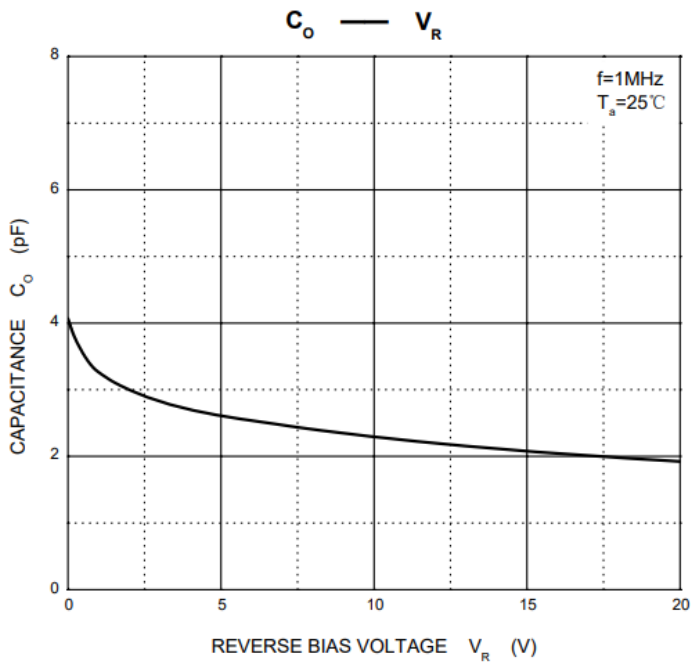
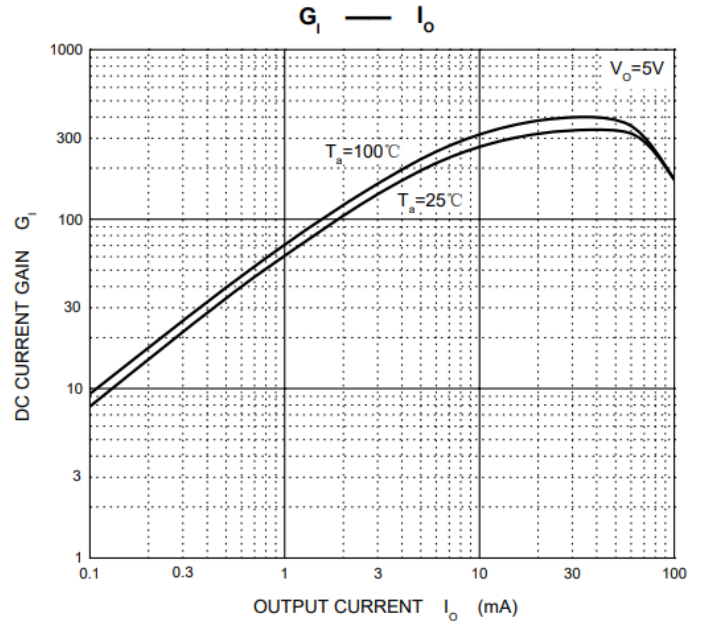
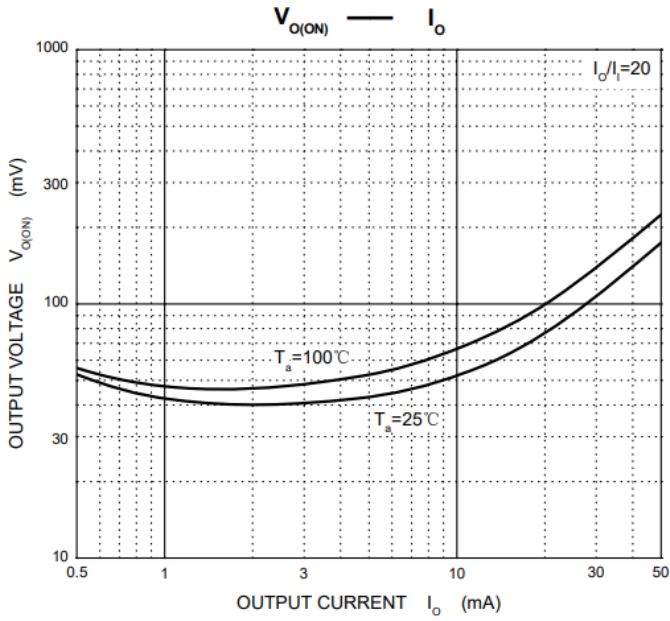
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DTC144EUA	F2	Approximate 0.005	3000	30000	120000	7" reel

■ Characteristics (Typical)





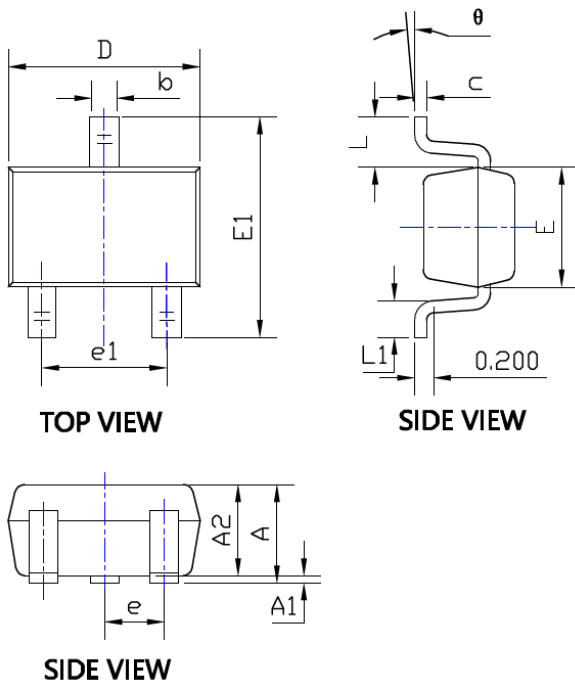
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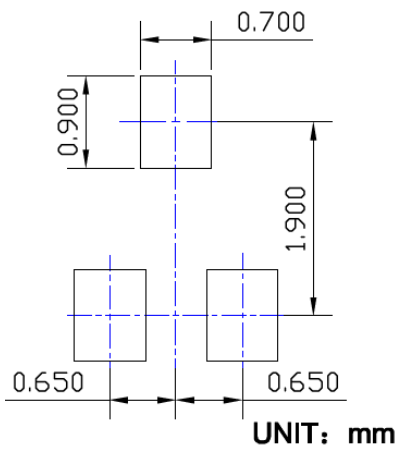
DTC144EUA

■SOT-323 Package Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026 TYP		0.650 TYP	
e1	0.047	0.055	1.200	1.400
L	0.021 REF		0.525 REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

■SOT-323 Soldering Footprint





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