



## NPN Digital Transistors (Built-in Resistors)

### Features

- Moisture Sensitivity Level 1
- Surface mount package ideally Suited for Automatic Insertion
- Epoxy meets UL-94 V-0 flammability rating, halogen-free



# DTC144WE

## Electrical Characteristics (Ta=25 unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	$V_{CC}=5V, I_c=100\mu A$	0.8		
	$V_{I(on)}$	V	$V_o=0.3V, I_c=2mA$			4
Output voltage	$V_{O(on)}$	V	$I_o / I_i = 10mA / 0.5 mA$			0.3
Input current	$I_i$	mA	$V_i=5V$			160
Output current	$I_{o(off)}$	$\mu A$	$V_{CC}=50V, V_i=0$			0.5
DC current gain	$G_i$		$V_o=5V, I_o = 5mA$	56		
Input resistance	$R_1$	k		33	47	61
Resistance ratio	$R_2/R_1$			0.37	0.47	0.57
Transition frequency	$f_T$	MHz	$V_o=10V, I_o=5mA, f=100MHz$		250	

## Ordering Information (Example)

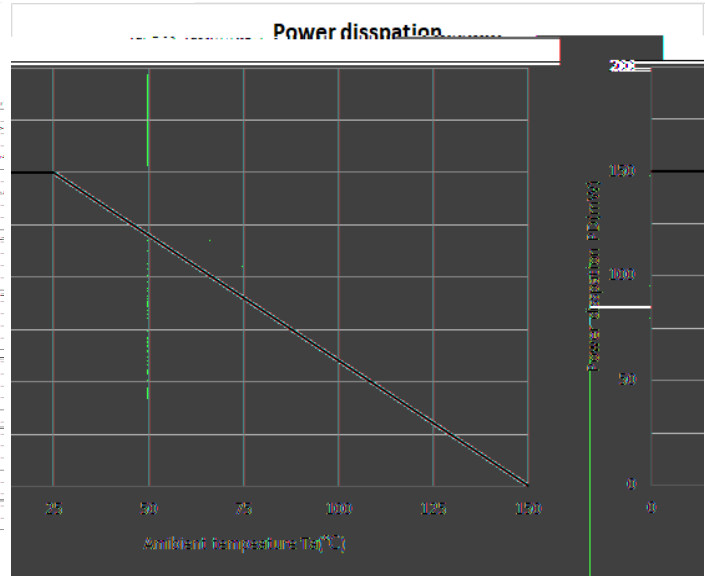
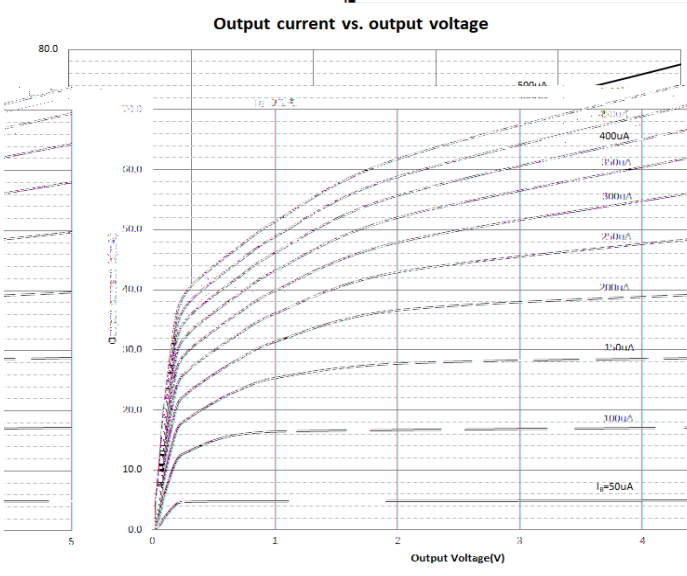
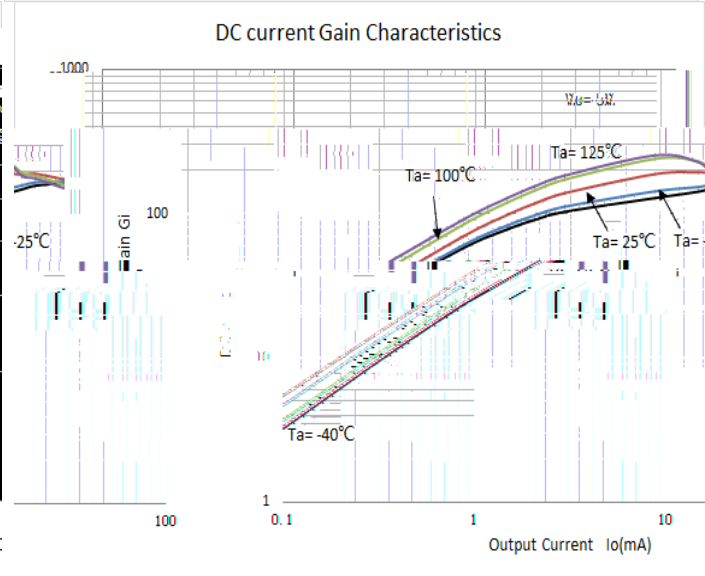
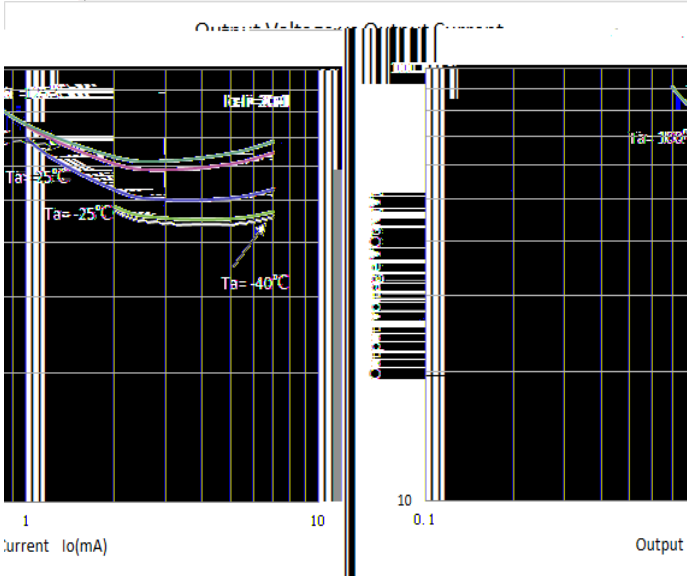
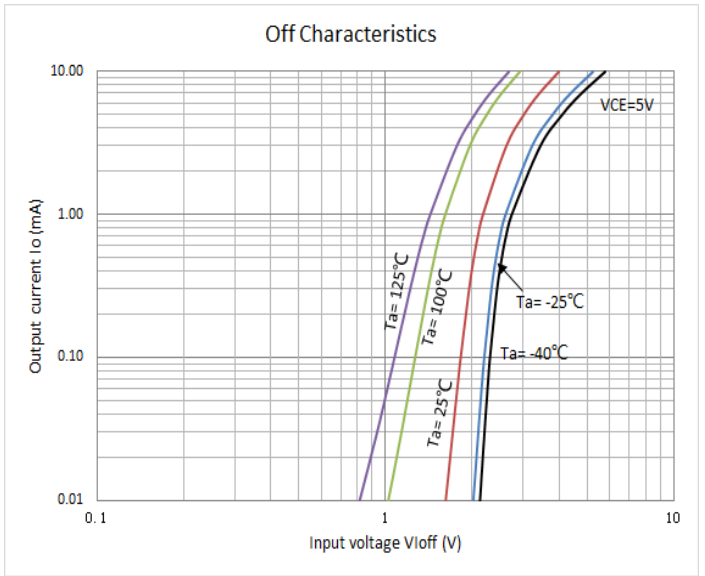
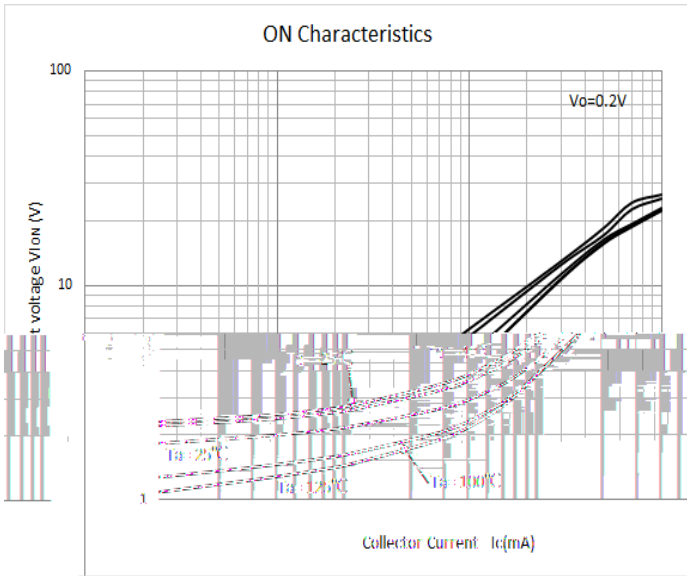
Preferred P/N	Packing code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
DTC144WE	F2	Approximate 0.0027	3000	30000	120000	7" reel

## Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{J-A}^{(1)}$	/W	833



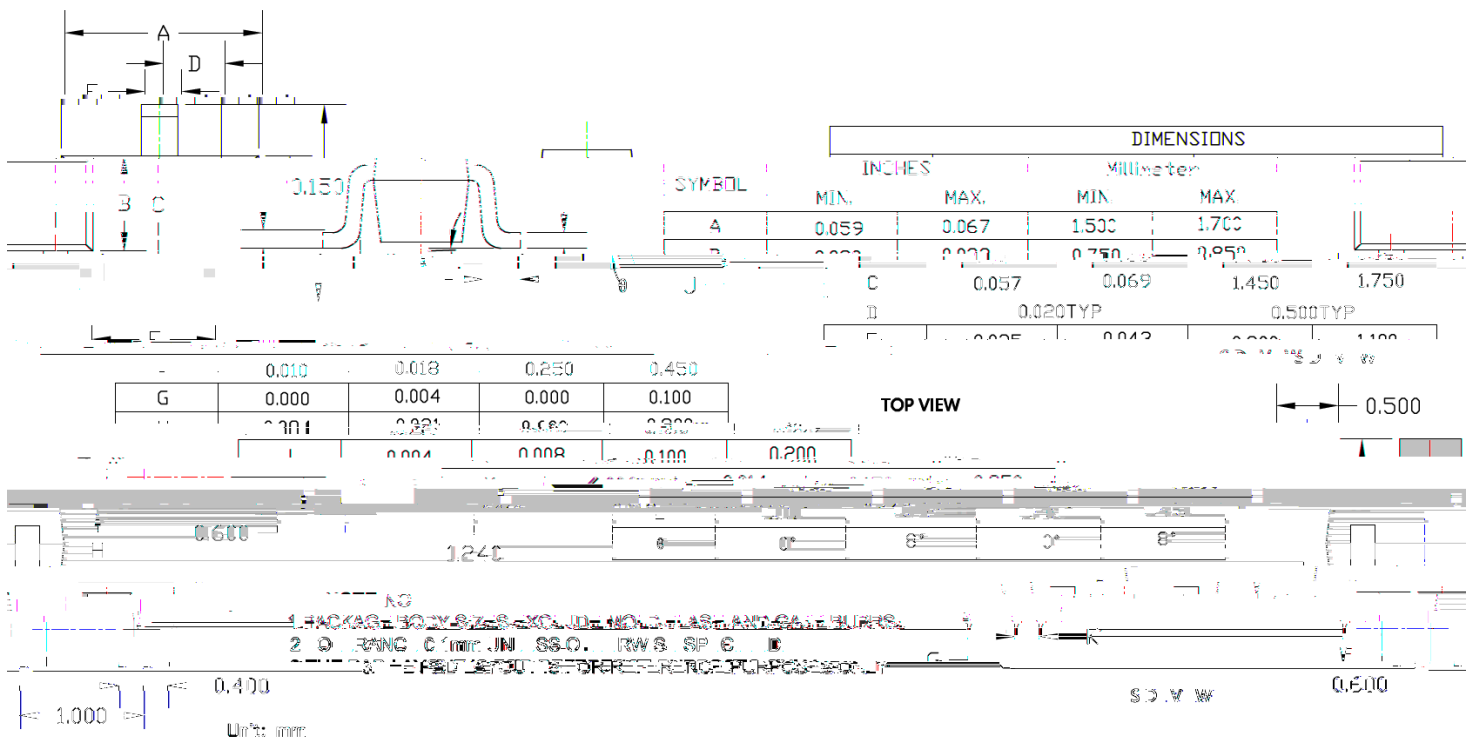
## Characteristics (Typical)





# DTC144WE

## SOT-523 Package Outline Dimensions



Standard Solder Pad Layout

Sugg

### Note:

1. All dimensions are in millimeters (mm) unless otherwise specified.

[所有尺寸均以毫米为单位，除非另有说明]

2. General tolerances:  $\pm 0.10\text{mm}$  unless otherwise specified.

[通用公差为 $\pm 0.10\text{mm}$ ，除非另有说明]

3. Dimensions and tolerances per ASME Y14.5M-2018.

[尺寸和公差遵循 ASME Y14.5M-2018]

4. Solder residues, burrs and gate vestiges shall not exceed 0.15 mm in maximum.

[所有尺寸均不包括手工制和该口残留，手工与该口残留的尺寸

不得超过 0.15 mm 每侧。

[尺寸不包括单边最大 0.10 mm 的半侧凸出部分]

5. Dimensions shall be measured from the datum plane of the seating plane.

6. Dimensions shall be measured from the datum plane of the seating plane.

7. Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.

[成型的管脚应为同一平面，共面性最大为 0.1mm]

8. ★It is the key size.

[★ 标记为关键尺寸]



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