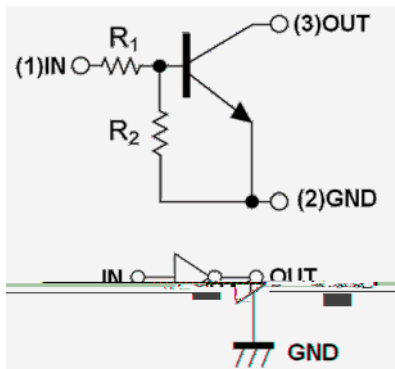
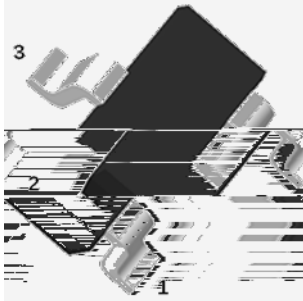




NPN Digital Transistors (Built-in Resistors)



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package** SOT-523
- **Terminals** Tin plated leads, solderable per J-STD-002 and JESD22-B102

Maximum Ratings ($T_a=25$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				84
Supply voltage	V_{CC}	V		50
Input voltage	V_{IN}	V		-10 to +30
Output current	I_o	mA		100
Power dissipation	P_D	mW		150
Junction temperature	T_J			-55 to +150
Storage temperature	T_{STG}			-55 to +150



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Electrical Characteristics (T_a=25 Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Input voltage	V _{I(off)}	V	V _{CC} =5V, I _O =100uA	0.8		
	V _{I(on)}	V	V _O =0.3V, I _O =2mA			3.0
Output voltage	V _{O(on)}	V	I _O / I _I = 10mA / 0.5 mA			0.3
Input current	I _I	mA	V _I =5V			0.88
Output current	I _{O(off)}	uA	V _{CC} =50V, V _I =0			0.5
DC current gain	G _I		V _O =5V, I _O = 10mA	24		
Input resistance	R ₁	k		7	10	13
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	

Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{J-A} ⁽¹⁾	/W	833
Thermal resistance, junction-to-case	R _{J-C} ⁽¹⁾	/W	666

Note:

1 Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 25.4mm*25.4mm copper pad areas

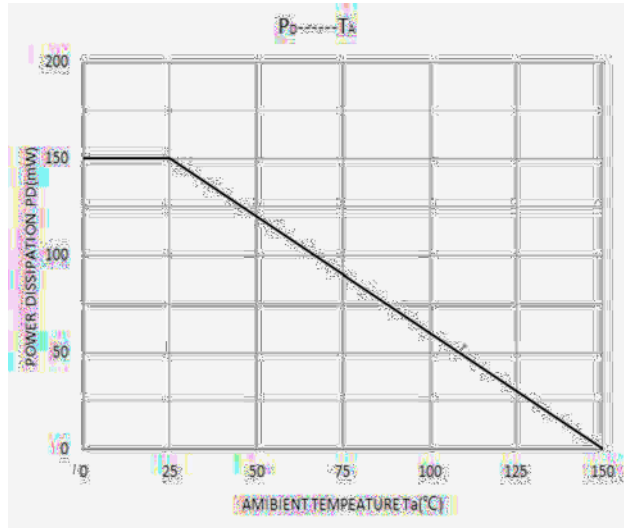
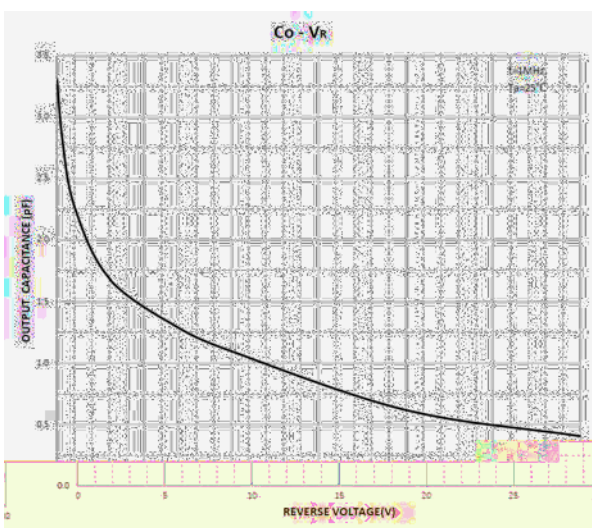
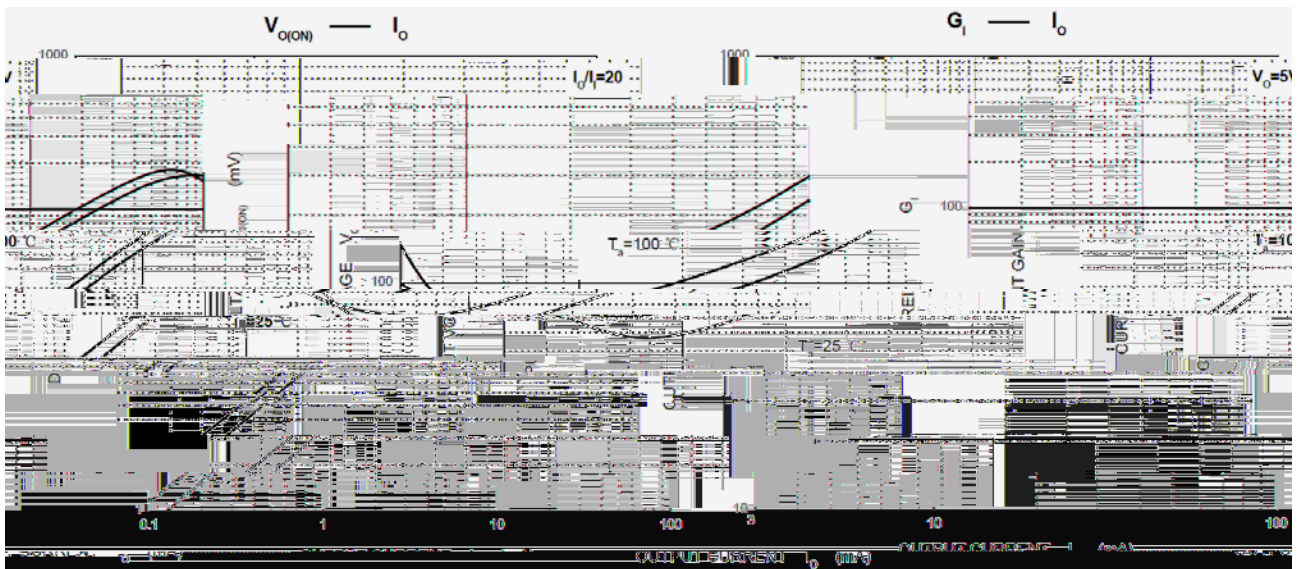
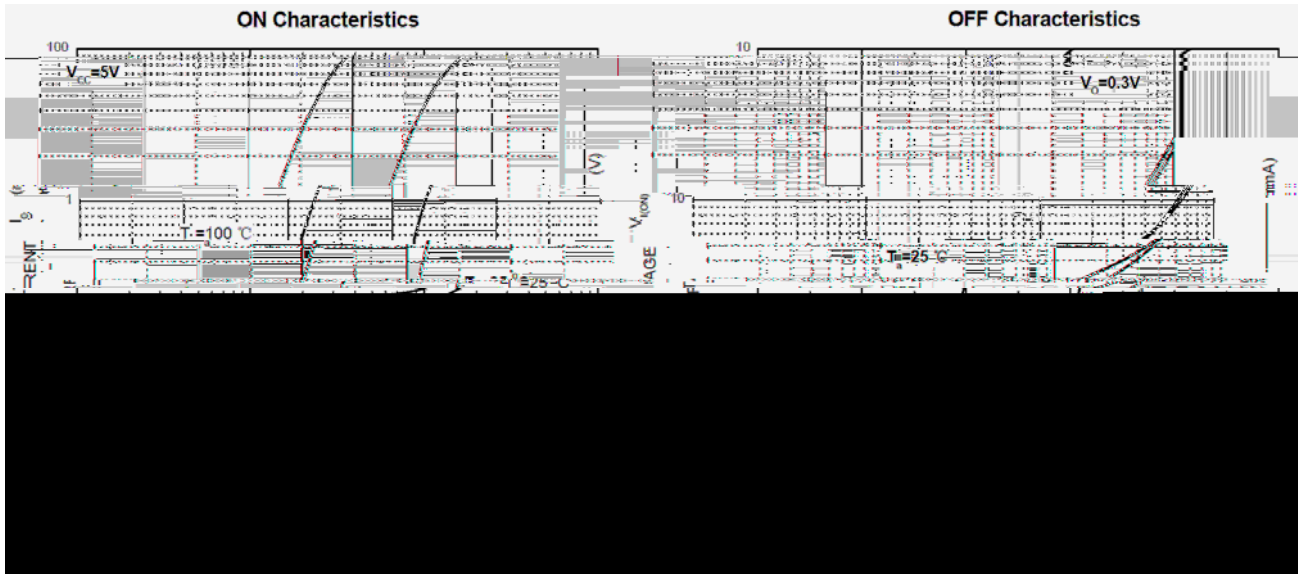
Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
DTC114WE	F2	Approximate 0.0027	3000	30000	120000	7" reel



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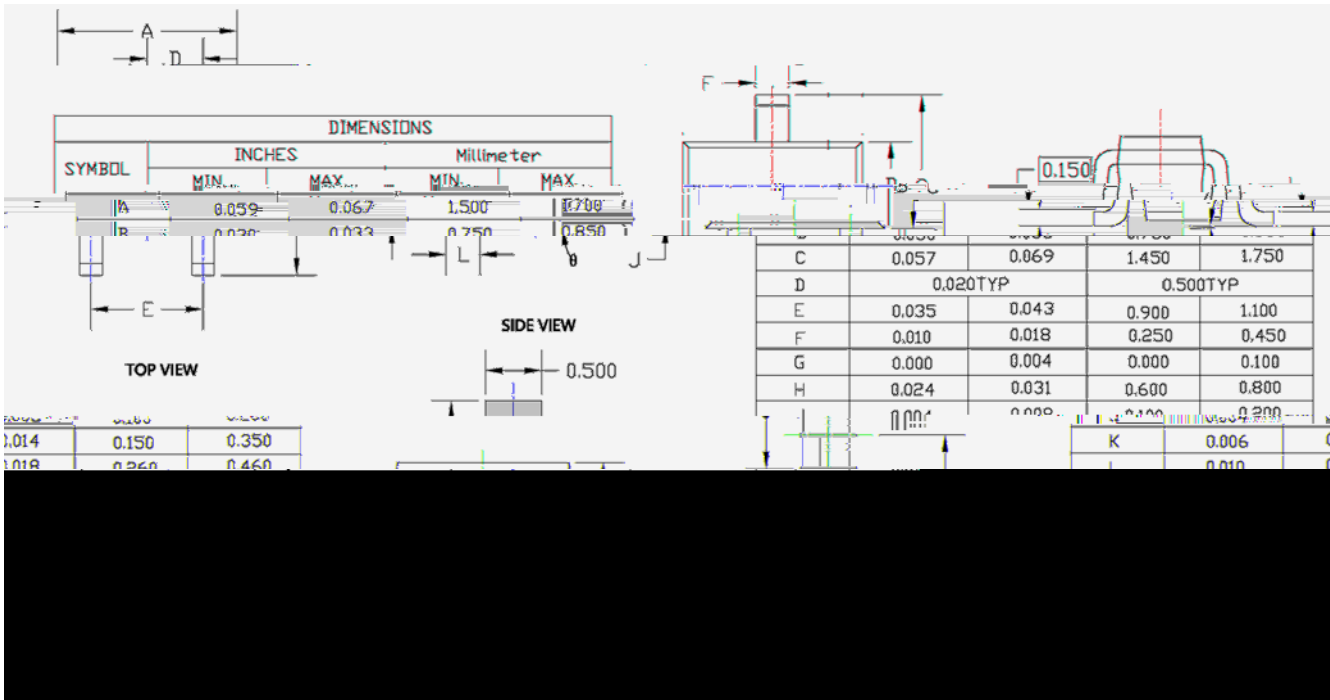
Characteristics





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Outline Dimensions



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 标准]

4. All dimensions are shown to the nearest 0.01 mm unless otherwise specified.

[除非另有说明, 所有尺寸均以 0.01 mm 为最小单位]

Dimension b does not include dambar protrusion of max 0.100 mm per side.

[尺寸 b 不包括每侧最大 0.100 mm 的中筋凸出部分]

5. Dimension b does not include dambar protrusion of max 0.100 mm per side.

[尺寸 b 不包括每侧最大 0.100 mm 的中筋凸出部分]

6. All dimensions are shown to the nearest 0.01 mm unless otherwise specified.

[除非另有说明, 所有尺寸均以 0.01 mm 为最小单位]

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

[引线应在同一平面内, 其高度公差为 0.076 mm]

8. This is the key size.

[★ 标记为关键尺寸]



DTC114WE

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