

NPN Digital Transistors (Built-in Resistors)



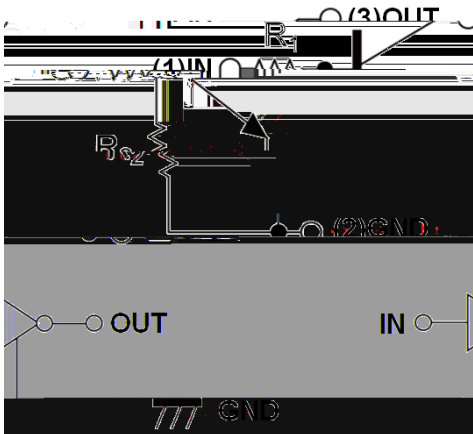
Features

- Moisture Sensitivity Level 1
- Surface mount package ideally Suited for Automatic Insertion
- Halogen-free

Mechanical Data

- Package:** SOT-523
- Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking:** 62

Equivalent circuit



Maximum Ratings (Ta=25 Unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	VALUE
Supply Voltage	V_{CC}	V		50
Input Voltage	V_{IN}	V		-5 to +12
Output Current	I_o	mA		100
Power Dissipation	P_D	mW		150
Junction Temperature	T_J			150
Storage Temperature	T_{STG}			-55 to +150



DTC123YE

Electrical Characteristics (Ta=25 unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	$V_{CC}=5V, I_o=100\mu A$	0.3	-	-
	$V_{I(on)}$	V	$V_o=0.3V, I_o=20mA$	-	-	3
Output voltage	$V_{O(on)}$	V	$I_o / I_i = 10mA / 0.5 mA$	-	-	0.3
Input current	I_i	mA	$V_i=5V$	-	-	3.8
Output current	$I_{O(off)}$	μA	$V_{CC}=50V, V_i=0$	-	-	0.5
DC current gain	G_1		$V_o=5V, I_o = 10mA$	33	-	-
Input resistance	R_1	k		1.54	2.2	2.86
Resistance ratio	R_2/R_1			3.6	4.5	5.5
Transition frequency	f_T	MHz	$V_o=10V, I_o=-5mA$	-	250	-

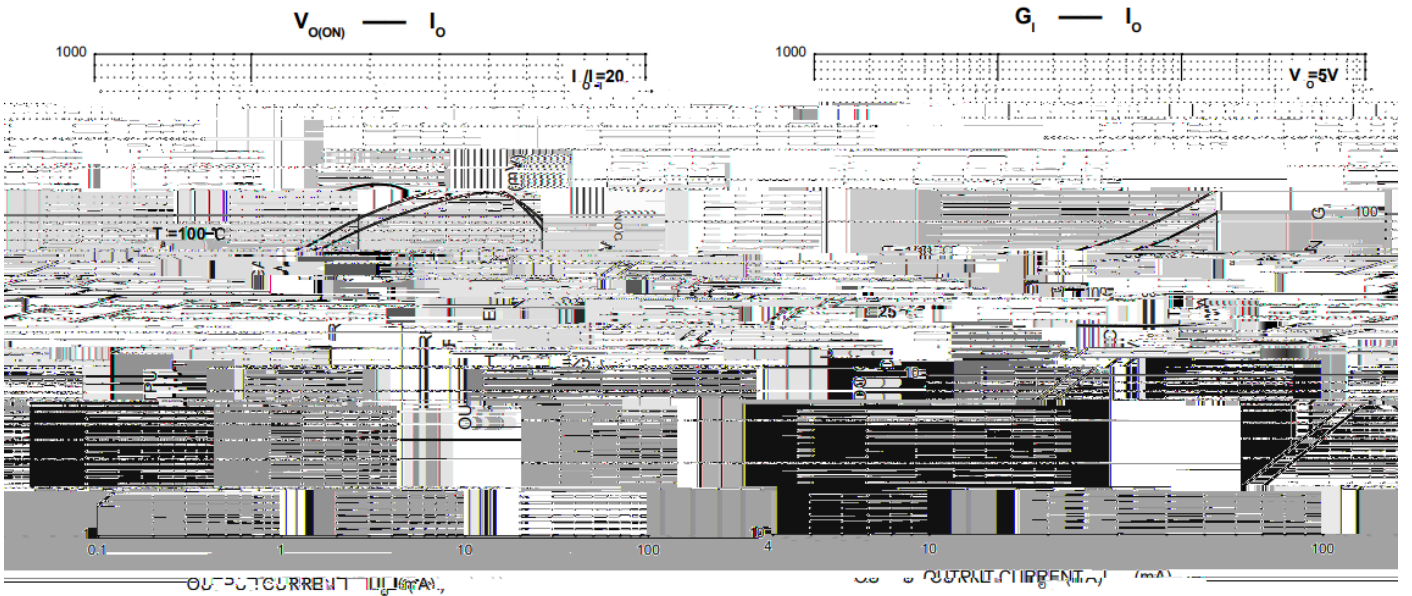
Ordering Information (Example)

Preferred P/N	Packing code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
DTC123YE	F2	Approximate 0.0027	3000	30000	120000	7" reel



DTC123YE

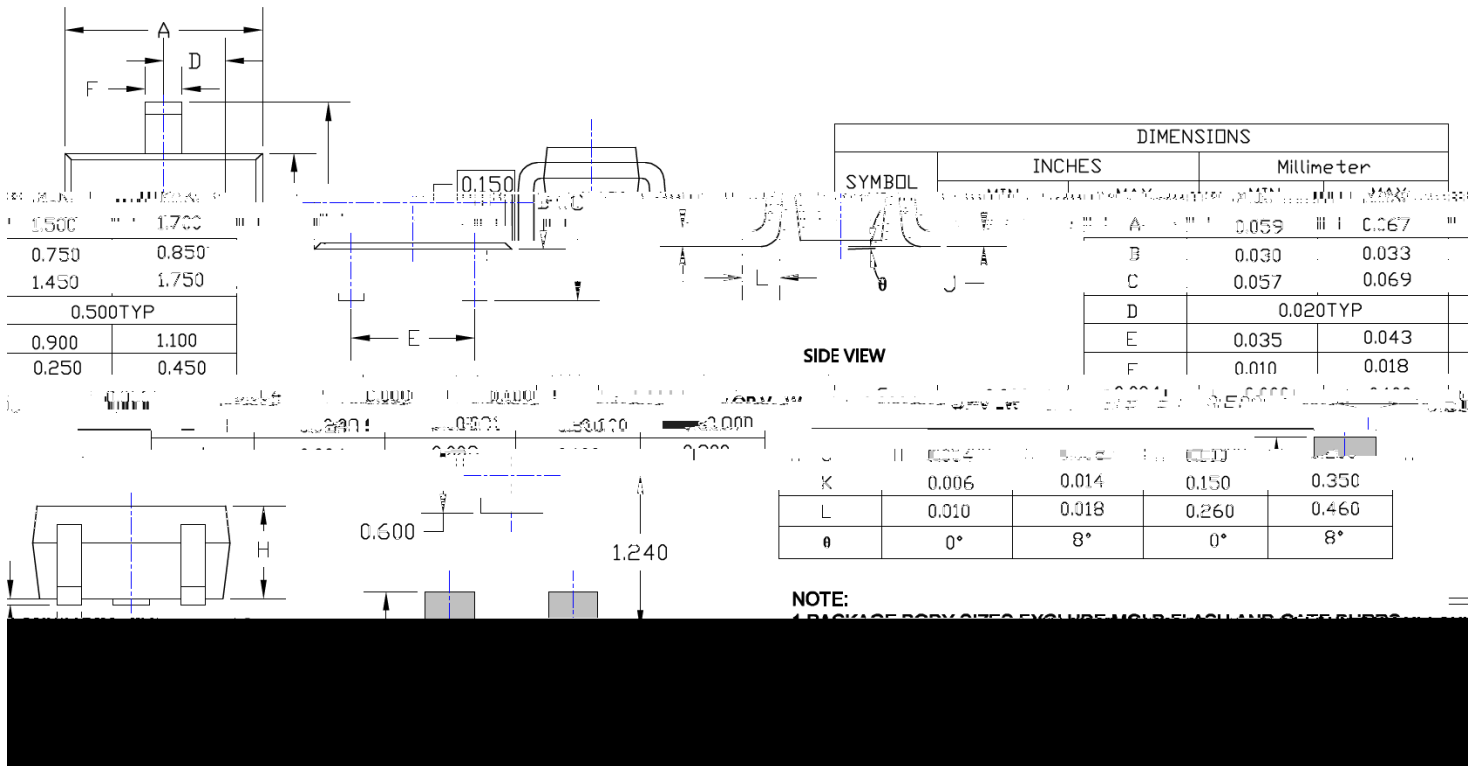
Characteristics (Typical)





DTC123YE

SOT-523 Package Outline Dimensions



Note:

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

