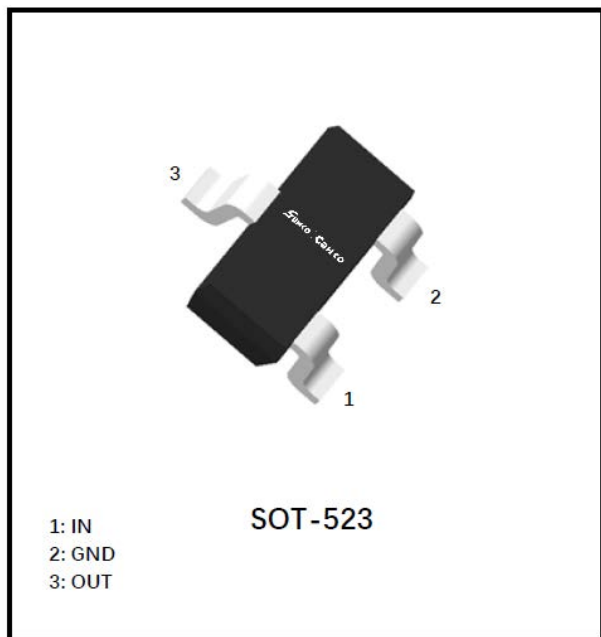


Digital Transistors (Built-in Resistors)



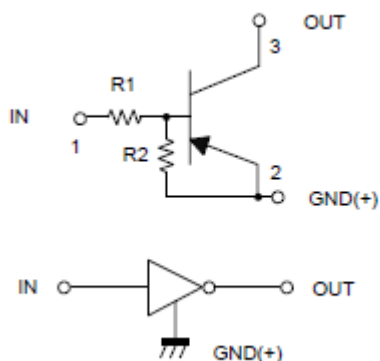
Features

- 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:** 12

■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 +5
Output Current	I_o	mA		-100
Power Dissipation	P_D	mW		150
Junction Temperature	T_J	°C		150
Storage Temperature	T_{STG}	°C		-55 to +150

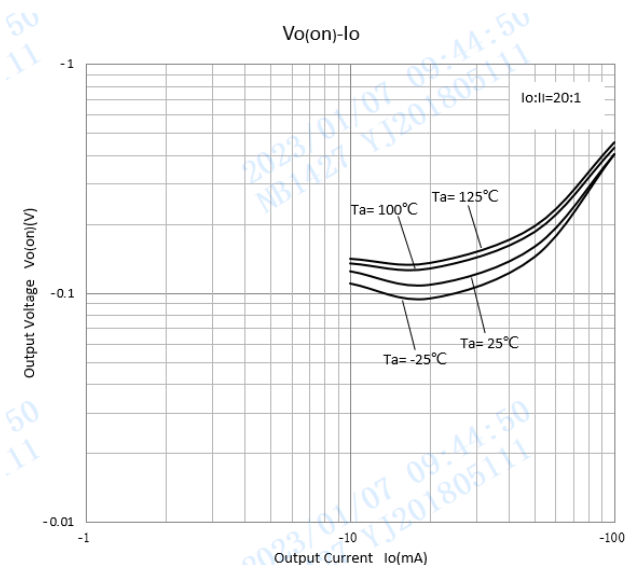
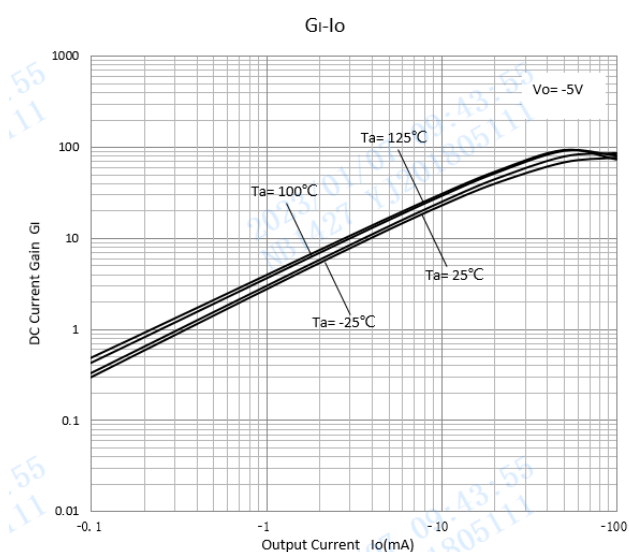
■ Electrical Characteristics (Ta=25°C unless otherwise specified)

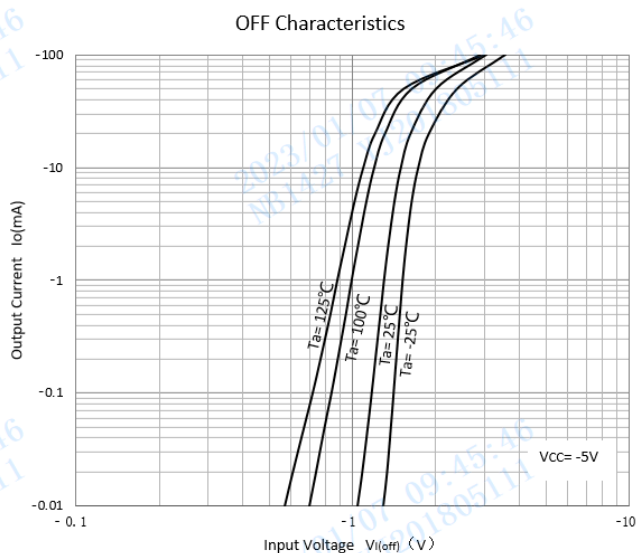
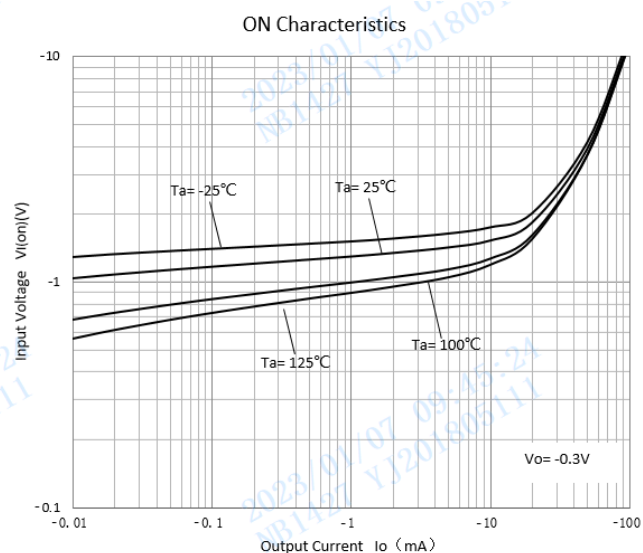
ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	$V_{CC}=-5V, I_o=-100\mu A$	-0.5	-	-
	$V_{I(on)}$	V	$V_o=-0.3V, I_o=-20mA$	-	-	-3
Output voltage	$V_{o(on)}$	V	$I_o/I_i=-10mA/-0.5mA$	-	-	-0.3
Input current	I_i	mA	$V_i=-5V$	-	-	-3.8
Output current	$I_{o(off)}$	μA	$V_{CC}=-50V, V_i=0$	-	-	-0.5
DC current gain	G_i		$V_o=-5V, I_o=-20mA$	20	-	-
Input resistance	R_i	k Ω		1.54	2.2	2.86
Resistance ratio	R_2/R_1			0.8	1	1.2

■ Ordering Information (Example)

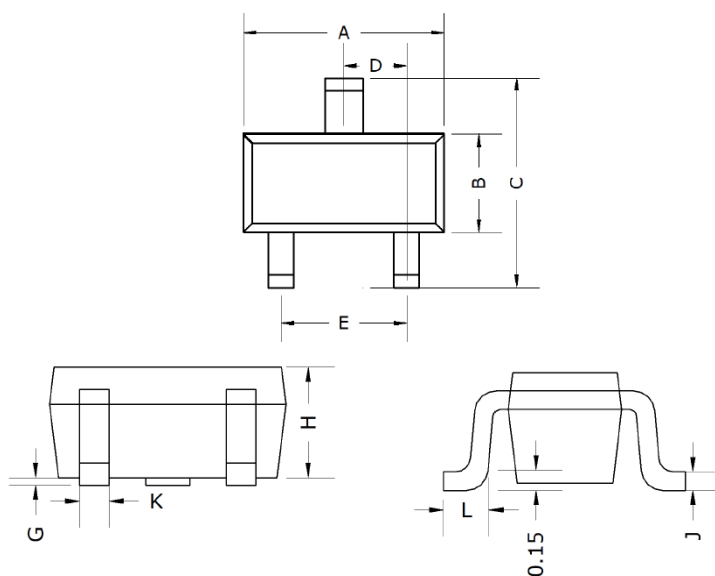
Preferred P/N	Packing Code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
DTA123EE	F2	Approximate 0.0027	3000	30000	120000	7" reel

■ Characteristics (Typical)



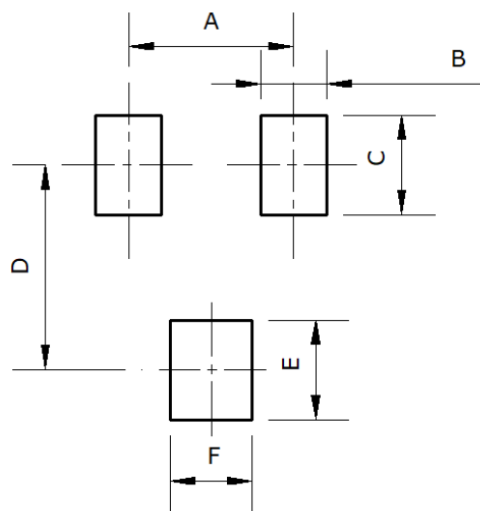


■ SOT-523 Package Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.059	0.067	1.50	1.70
B	0.030	0.033	0.75	0.85
C	0.057	0.069	1.45	1.75
D	0.020TYP		0.50TYP	
E	0.035	0.043	0.90	1.10
G	0.000	0.004	0.00	0.10
H	0.024	0.031	0.60	0.80
J	0.004	0.008	0.10	0.20
K	0.006	0.014	0.15	0.35
L	0.010	0.018	0.26	0.46

■ SOT-523 Suggested Pad Layout



DIMENSIONS	
DIM	MM (TYP)
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50

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