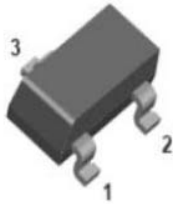
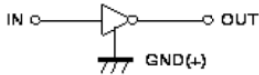
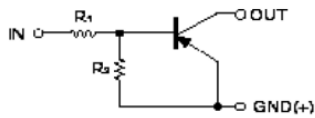


PNP Digital Transistors (Built-in Resistors)



1. IN
2. GND
3. OUT

SOT-323

Features

- Moisture sensitivity level 1
- General switching and amplification
- Surface mount package ideally suited for automatic insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				35
Supply voltage	V _{CC}	V		-50
Input voltage	V _{IN}	V		-40 to +10
Output current	I _O	mA		-100
Power dissipation	P _D	mW		200
Junction temperature	T _J	°C		-55 to +150
Storage temperature	T _{STG}	°C		-55 to +150

■ **Electrical Characteristics** ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Input voltage	$V_{I(\text{off})}$	V	$V_{CC}=-5\text{V}, I_o=-100\mu\text{A}$	-0.4		
	$V_{I(\text{on})}$	V	$V_o=-0.3\text{V}, I_o=-2\text{mA}$			-2.5
Output voltage	$V_{O(\text{on})}$	V	$I_o / I_i = -10\text{mA} / -0.5\text{mA}$			-0.3
Input current	I_i	μA	$V_i=-5\text{V}$			-120
Output current	$I_{O(\text{off})}$	μA	$V_{CC}=-50\text{V}, V_i=0$			-0.1
DC current gain	G_i		$V_o=-5\text{V}, I_o = -5\text{mA}$	56		
Input resistance	R_1	$\text{k}\Omega$		15.4	22	28.6
Resistance ratio	R_2/R_1			1.7	2.1	2.6
Transition frequency	f_T	MHz	$V_o=-10\text{V}, I_o=-5\text{mA}, f=100\text{MHz}$		250	

■ **Thermal Characteristics**

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	$^{\circ}\text{C}/\text{W}$	625
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	$^{\circ}\text{C}/\text{W}$	500

Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint



■ Characteristics

Fig 1: Input Voltage (On) Characteristics

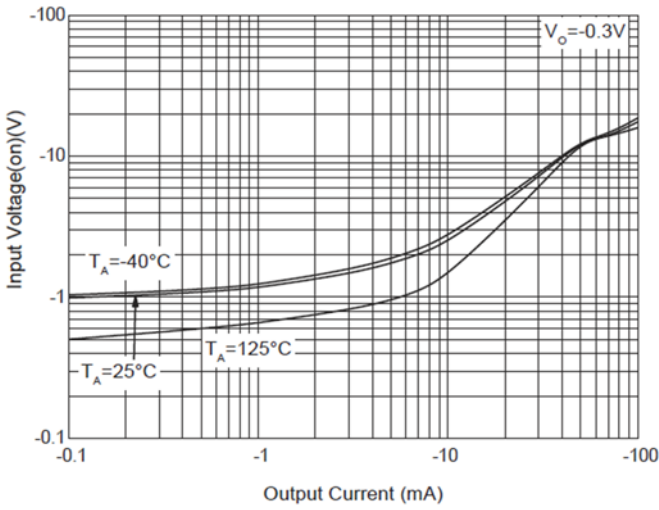


Fig 2: Input Voltage (Off) Characteristic

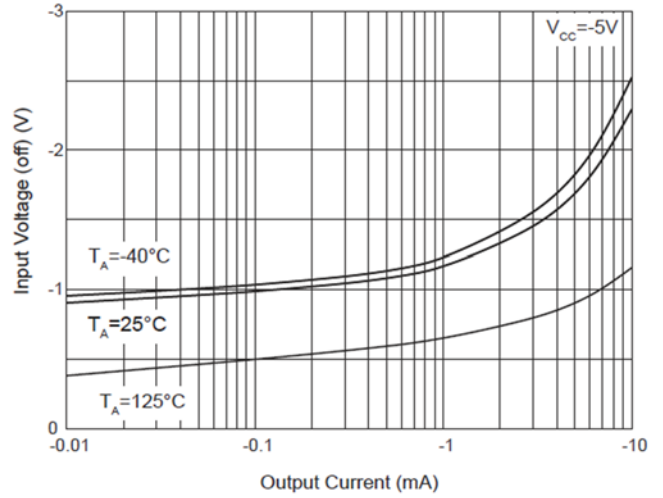


Fig 3: DC Current Gain Characteristics

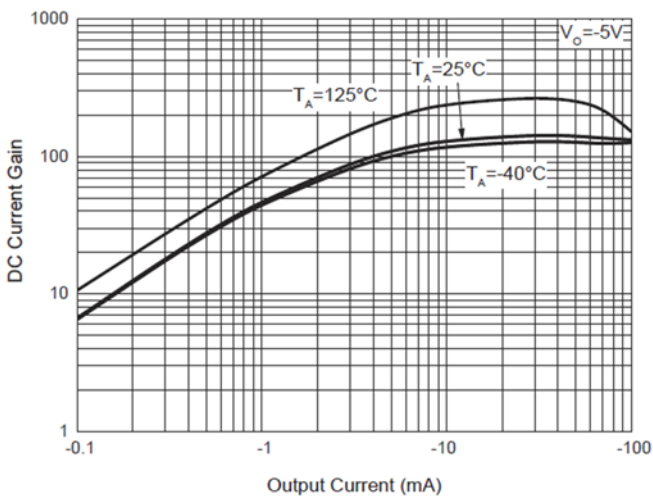


Fig 4: Output Voltage Characteristics

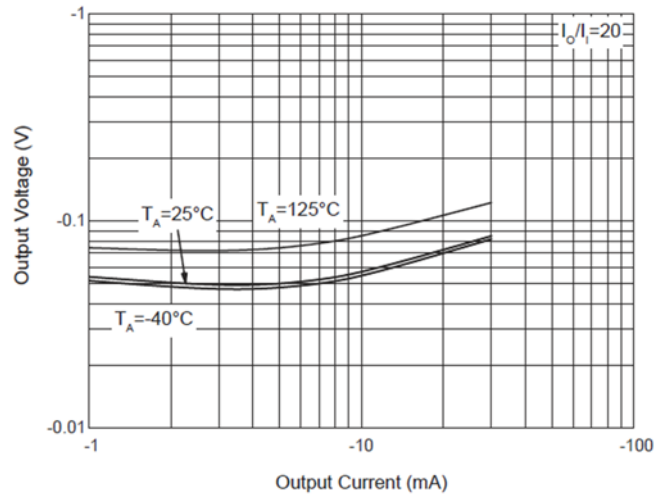
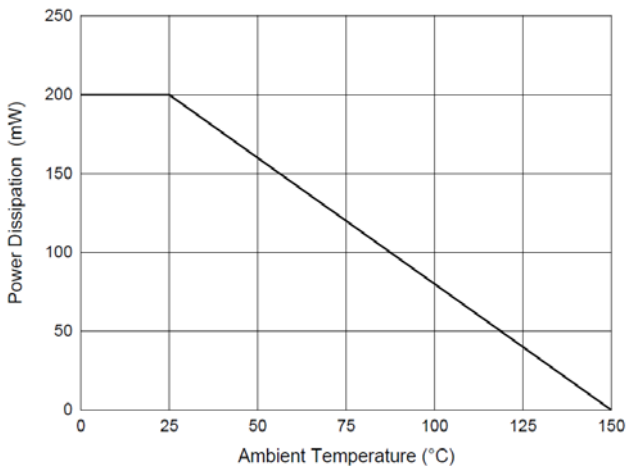


Fig 5: P_D - T_a Curve





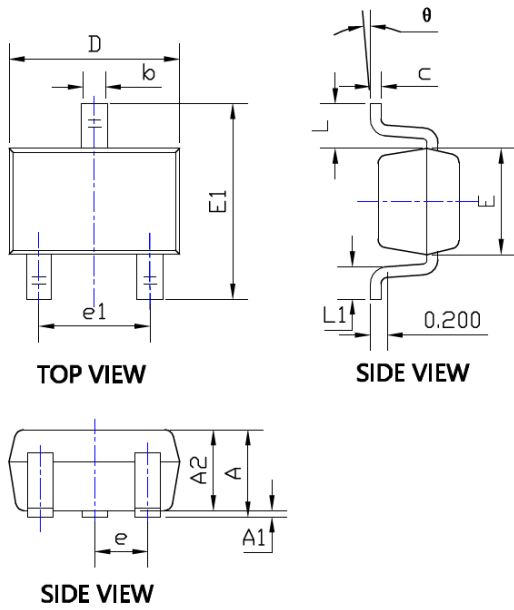
DTA124XUA

RoHS
COMPLIANT

Ordering Information

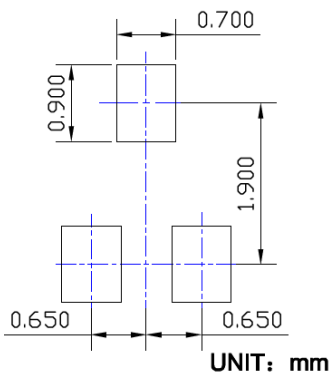
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
DTA124XUA	F2	Approximate 0.005	3000	30000	120000	7" reel

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	0.026TYP		0.650TYP	
e1	0.047	0.055	1.200	1.400
L	0.021REF		0.525REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

Suggested Pad Layout





Disclaimer

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