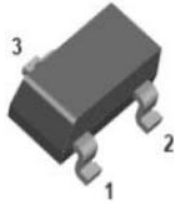
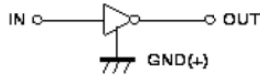
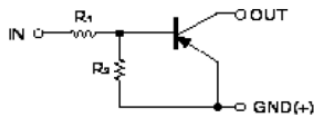


PNP Digital Transistors (Built-in Resistors)



1. IN
2. GND
3. OUT

SOT-323



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-323
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: P13

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

ITEM	SYMBOL	UNIT	CONDITIONS	VALUE
Supply Voltage	V_{CC}	V		-50
Input Voltage	V_{IN}	V		-40 to +10
Output Current	I_O	mA		-500
Power Dissipation	P_D	mW		200
Junction Temperature	T_J	°C		150
Storage Temperature	T_{STG}	°C		-55 to +150



DDTA114EUA

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

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	$V_{CC}=-5V, I_c=-100\mu A$	-0.5		
	$V_{I(on)}$	V	$V_o=-0.3V, I_c=-10mA$			-3.0
Output voltage	$V_{O(on)}$	V	$I_o/I_i=-50mA/-2.5mA$			-0.3
Input current	I_I	mA	$V_i=-5V$			-0.88
Output current	$I_{O(off)}$	μA	$V_{CC}=-50V, V_i=0$			-0.5
DC current gain	G_I		$V_o=-5V, I_o=-50mA$	60		
Input resistance	R_1	k Ω		7	10	13
Resistance ratio	R_2/R_1			0.8	1.0	1.2
Transition frequency	fT	MHz	$V_{CE}=-10V, I_E=50mA, f=100MHz$		200	

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DDTA114EUA	F2	Approximate 0.005	3000	30000	120000	7" reel

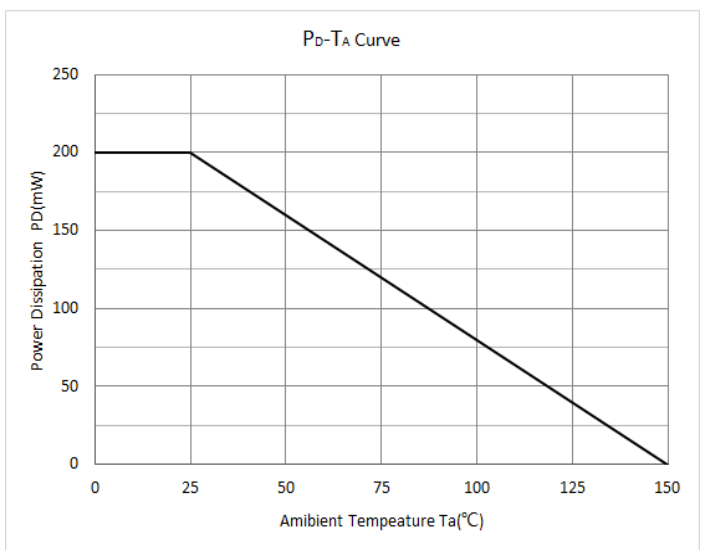
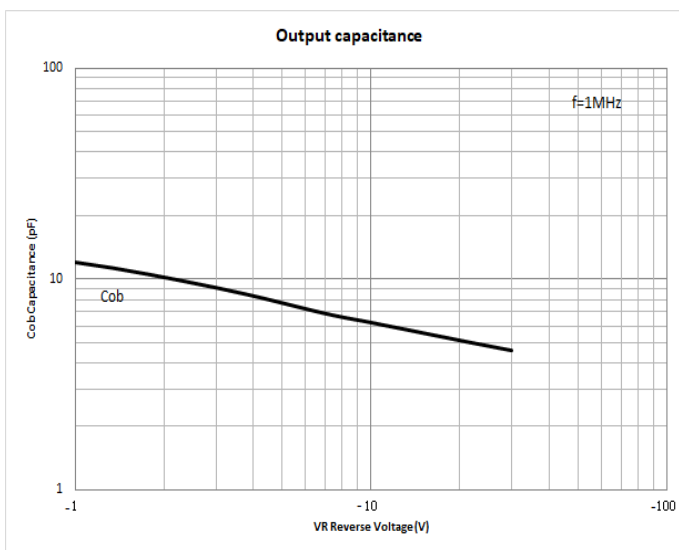
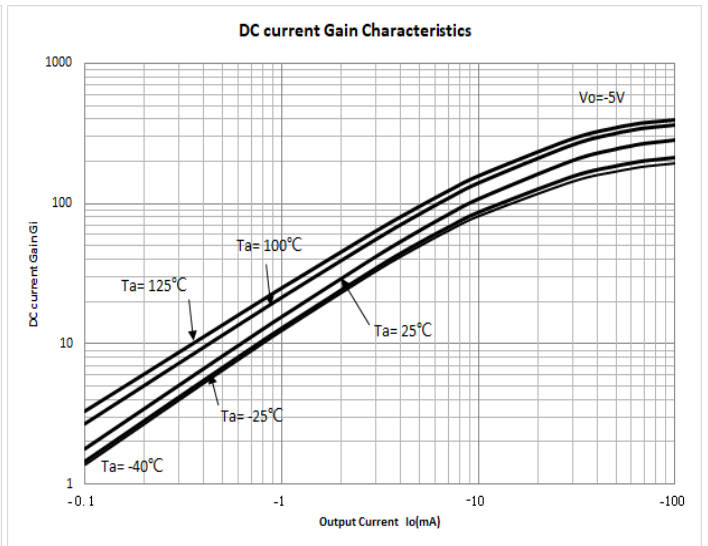
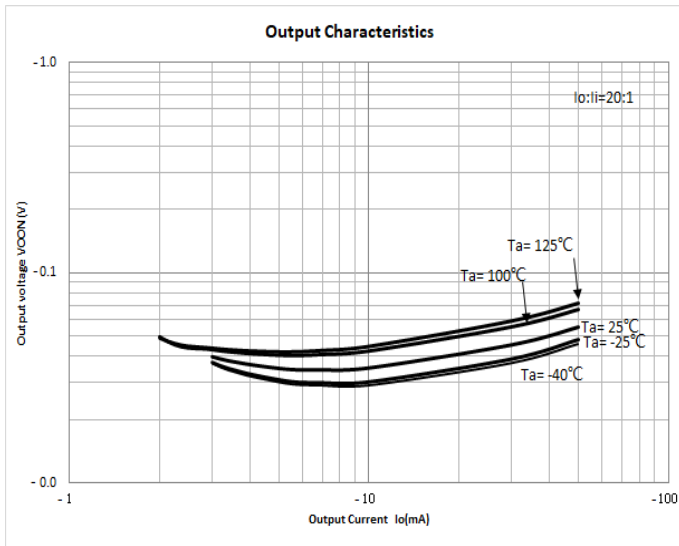
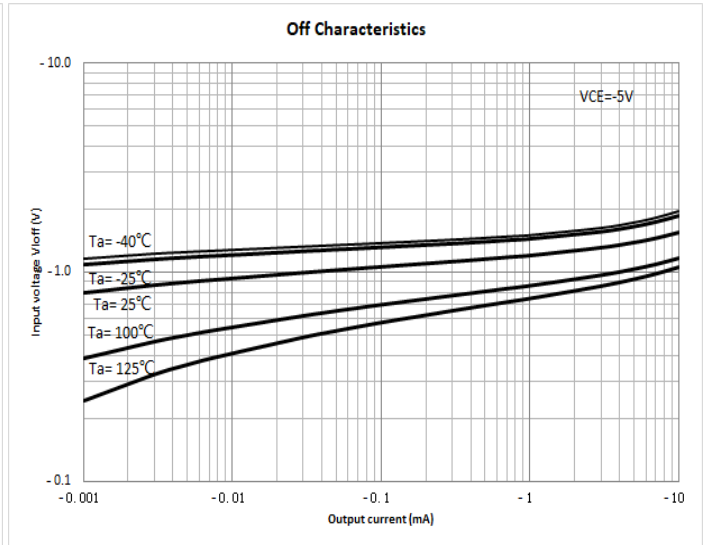
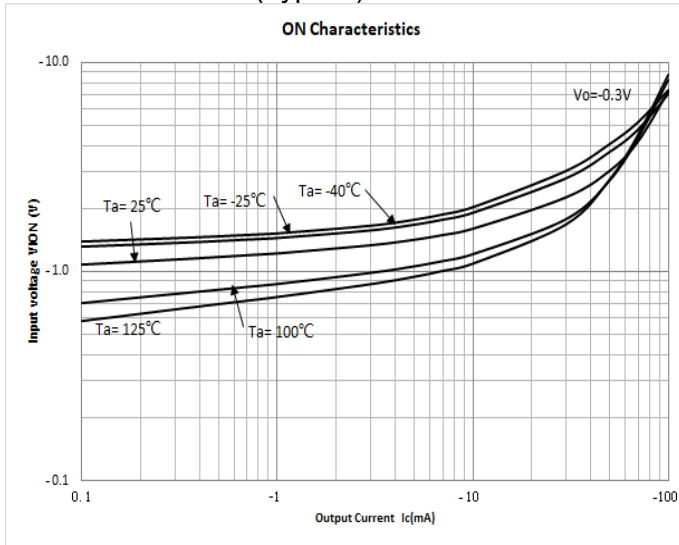
■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction to ambient	RthJA	°C/W	625
Thermal resistance, junction to case	RthJC	°C/W	500

Note: (1) Device mounted on PCB, single-sided copper, with stander footprint.



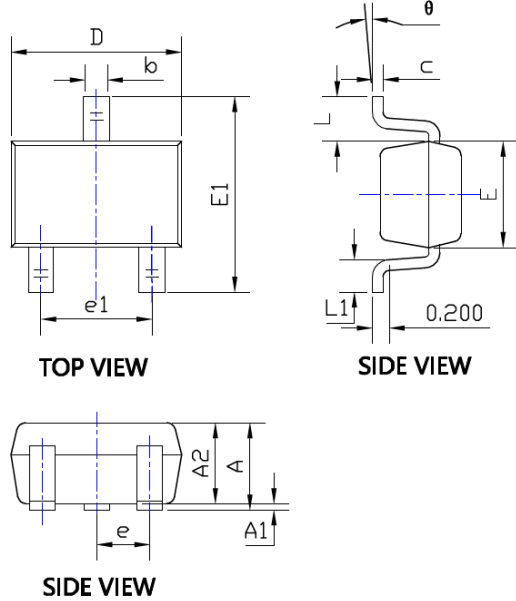
■ Characteristics (Typical)





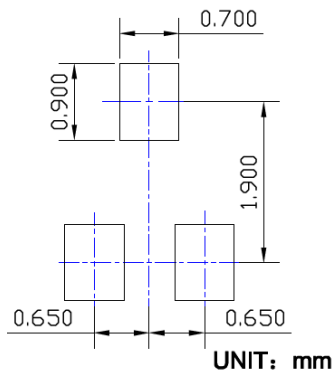
DDTA114EUA

■SOT-323 Package 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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