



DTB114E

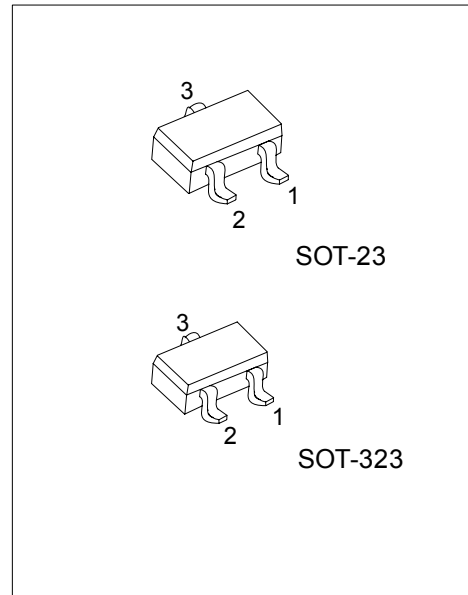
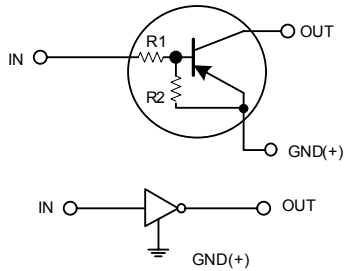
PNP SILICON TRANSISTOR

DIGITAL TRANSISTORS (BUILT-IN BIAS RESISTORS)

■ FEATURES

- * Built-in bias resistors that implies easy ON/OFF applications.
- * The bias resistors are thin-film resistors with complete isolation to allow positive input.

■ EQUIVALENT CIRCUIT



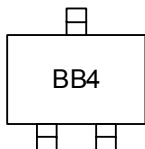
*Pb-free plating product number:DTB114EL

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
DTB114E-AE3-R	DTB114EL-AE3-R	SOT-23	G	I	O	Tape Reel
DTB114E-AL3-R	DTB114EL-AL3-R	SOT-323	G	I	O	Tape Reel

<p>DTB114EL-AE3-R</p>	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Plating</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23, AL3: SOT-323</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (Ta = 25)

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	-50	V
Input Voltage	V _{IN}	-40~+10	V
Output Current	I _{OUT}	-500	mA
Power Dissipation	P _D	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

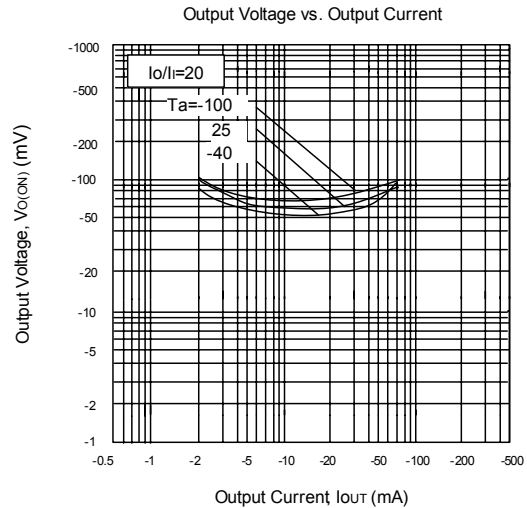
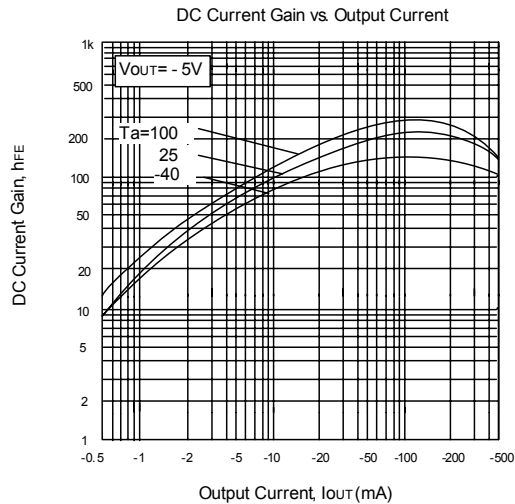
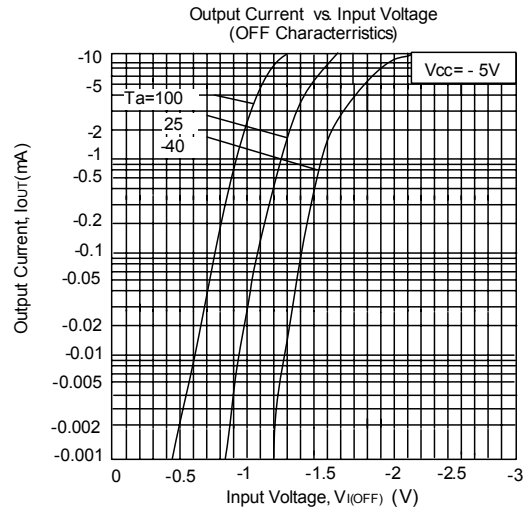
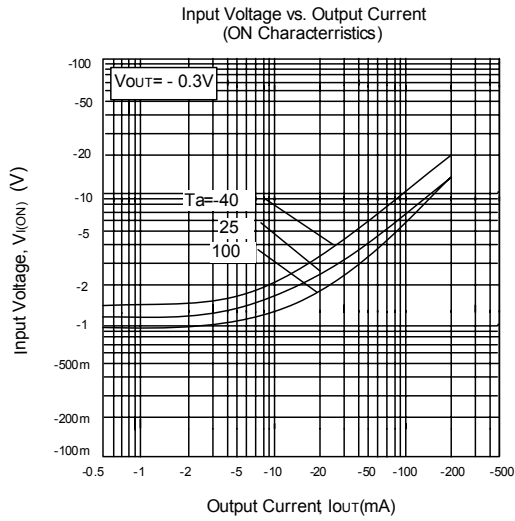
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta= 25 , unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V _{IN(OFF)}	V _{CC} = -5V, I _{OUT} = -100 μ A			-0.5	V
	V _{IN(ON)}	V _{OUT} = -0.3V, I _{OUT} = -10mA	-3			
Output Voltage	V _{OUT(ON)}	I _{OUT} /I _{IN} = -50mA/-2.5 mA		-0.1	-0.3	V
Input Current	I _{IN}	V _{IN} = -5V			-0.88	mA
Output Current	I _{OUT(OFF)}	V _{CC} = -50V, V _{IN} =0V			-0.5	μA
DC Current Gain	h _{FE}	V _{OUT} = -5V, I _{OUT} = -50mA	56			
Input Resistance	R ₁		7	10	13	kΩ
Resistance Ratio	R ₂ /R ₁		0.8	1	1.2	
Transition Frequency	f _T	V _{CE} = -10 V, I _E =5mA, f=100MHz*		200		MHz

*Transition frequency of the device

TYPICAL CHARACTERISTICS



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