



DTB113Z

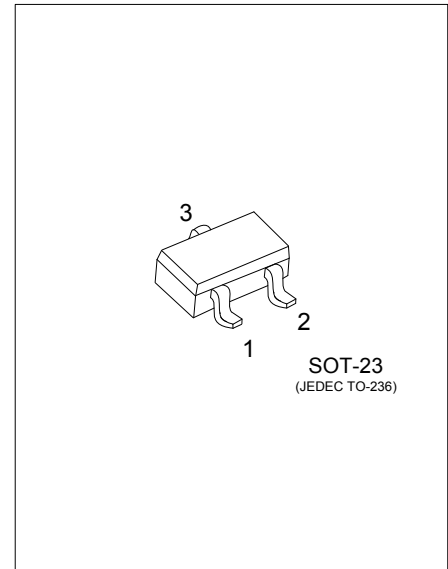
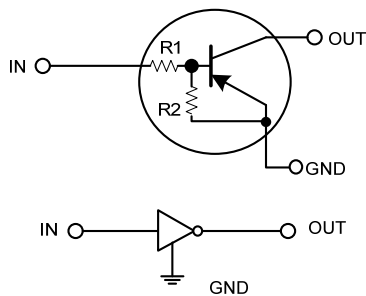
PNP SILICON TRANSISTOR

DIGITAL TRANSISTOR (BUILT-IN 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



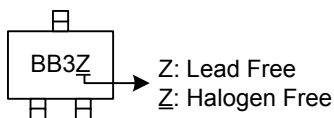
■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTB113ZL-AE3-R	DTB113ZG-AE3-R	SOT-23	I	G	O	Tape Reel

Note: Pin Assignment: I: IN G: GND O: OUT

<p>DTB113ZG-AE3-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-10 ~ +5	V
Output Current	I_C	-500	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	+150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

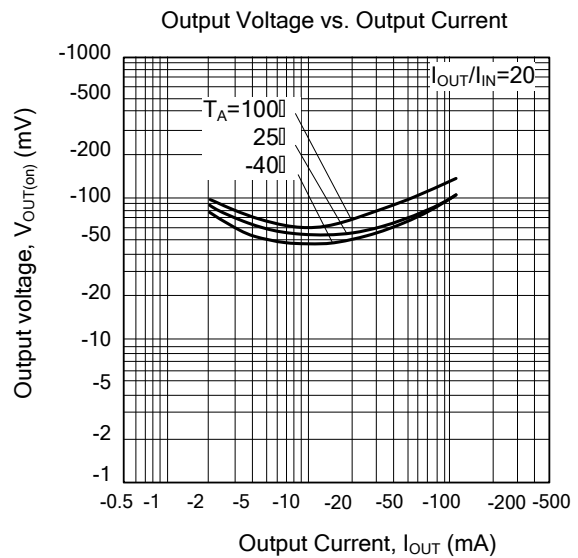
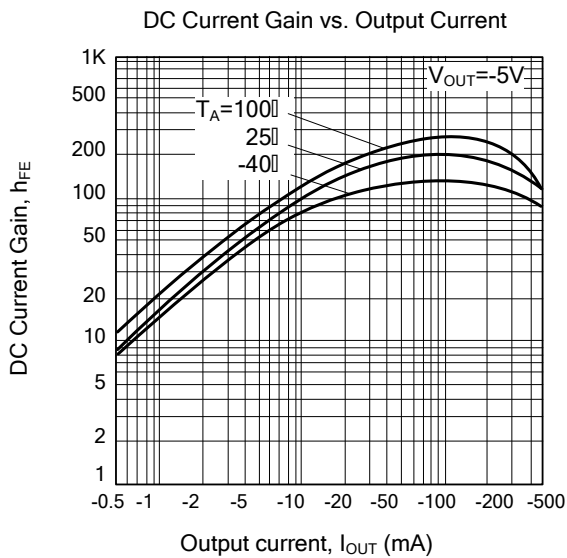
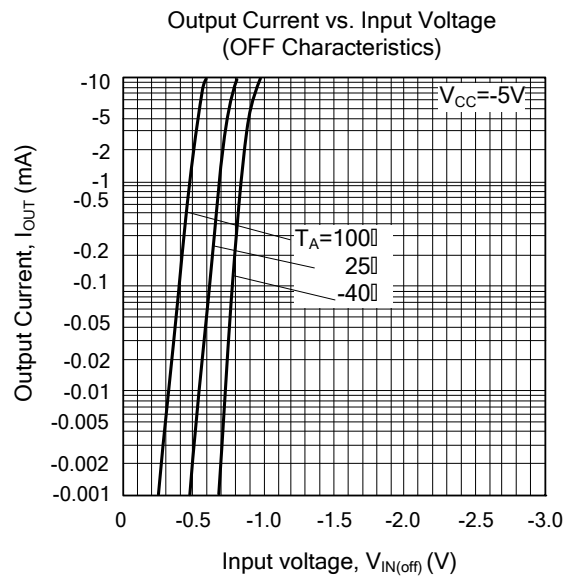
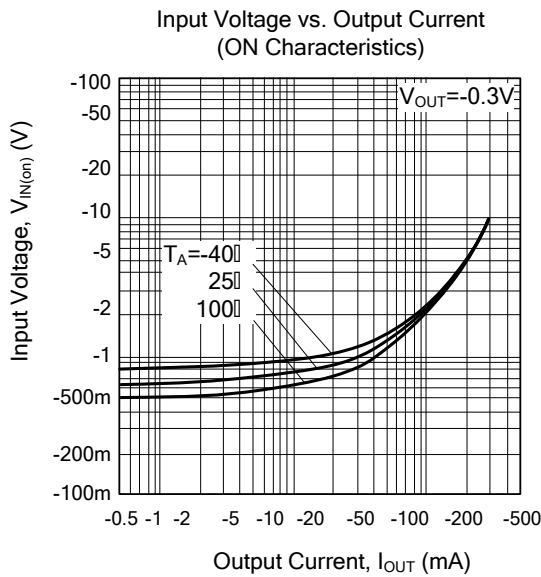
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(OFF)}$	$V_{CC} = -5V, I_{OUT} = -100\mu\text{A}$			-0.3	V
	$V_{IN(ON)}$	$V_{OUT} = -0.3V, I_{OUT} = -20\text{mA}$	-3			
Output Voltage	$V_{OUT(ON)}$	$I_{OUT}/I_{IN} = -50\text{mA}/-2.5\text{mA}$			-0.3	V
Input Current	I_{IN}	$V_{IN} = -5V$			-7.2	mA
Output Current	$I_{OUT(OFF)}$	$V_{CC} = -50V, V_{IN} = 0V$			-0.5	μA
DC Current Gain	h_{FE}	$V_{OUT} = -5V, I_{OUT} = -50\text{mA}$	56			
Input Resistance	R_1		0.7	1	1.3	K Ω
Resistance Ratio	R_2/R_1		8	10	12	
Transition Frequency	f_T	$V_{CE} = -10V, I_E = 50\text{mA}, f = 100\text{MHz}(\text{Note})$		200		MHz

Note: Transition frequency of the device

TYPICAL CHARACTERISTICS



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