



DTB143E

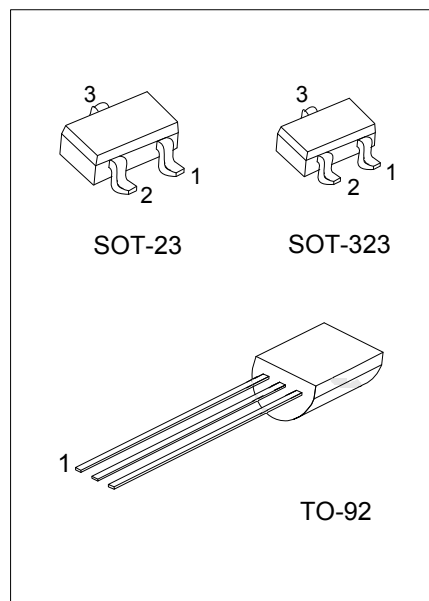
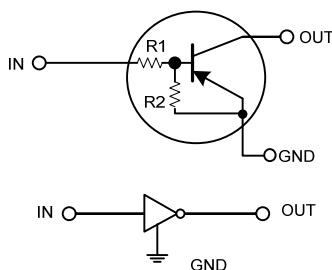
PNP DIGITAL TRANSISTOR

PNP 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

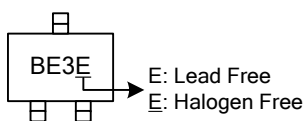


■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTB143EL-AE3-R	DTB143EG-AE3-R	SOT-23	G	I	O	Tape Reel
DTB143EL-AL3-R	DTB143EG-AL3-R	SOT-323	G	I	O	Tape Reel
DTB143EL-T92-B	DTB143EG-T92-B	TO-92	G	O	I	Tape Box
DTB143EL-T92-K	DTB143EG-T92-K	TO-92	G	O	I	Bulk
DTB143EL-T92-R	DTB143EG-T92-R	TO-92	G	O	I	Tape Reel

<p>DTB143EL-AE3-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Free</p>	<p>(1) B: Tape Box, K: Bluk, R: Tape Reel</p> <p>(2) AE3: SOT-23, AL3: SOT-323, T92: TO-92</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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■ MARKING(FOR SOT-23/SOT-323 PACKAGE)



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

PARAMETER		SYMBOL	RATING	UNIT
Supply Voltage		V_{CC}	-50	V
Input Voltage		V_{IN}	-30~+10	V
Output Current		I_{OUT}	-500	mA
Power Dissipation	SOT-23/SOT-323	P_D	200	mW
	TO-92		625	
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.

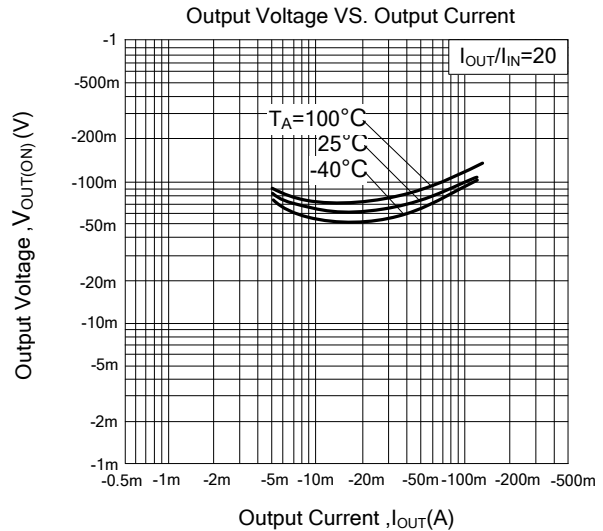
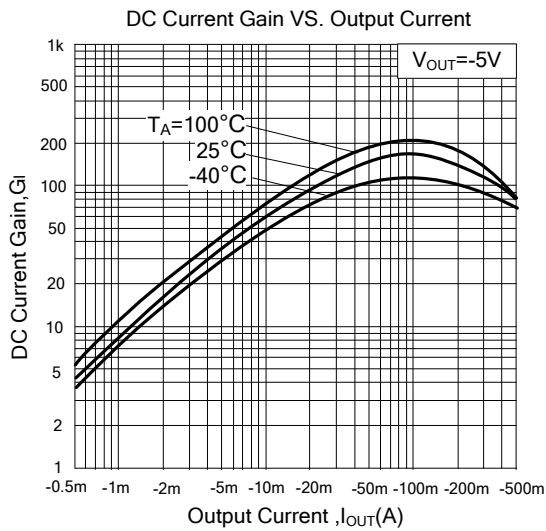
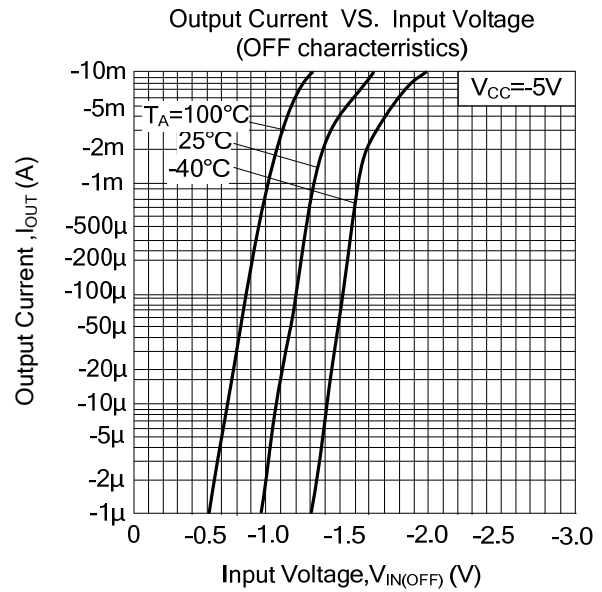
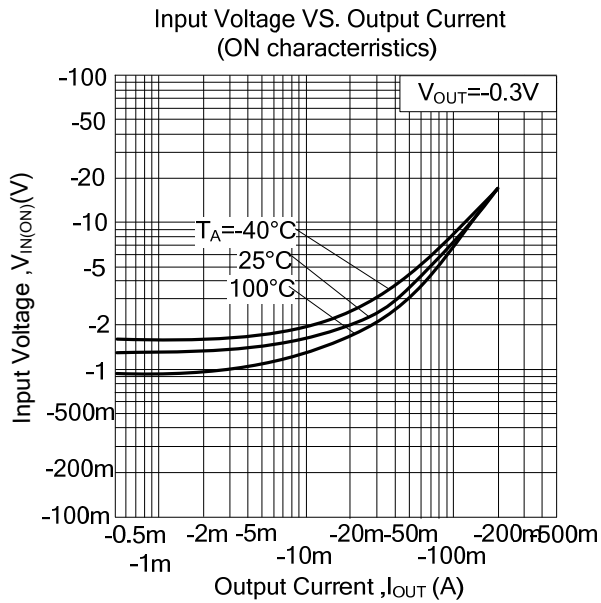
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(OFF)}$	$V_{CC} = -5V, I_{OUT} = 100\mu\text{A}$			-0.5	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}	$V_{IN} = -5V$			-1.8	mA
Output Current	$I_{OUT(OFF)}$	$V_{CC} = -50V, V_{IN} = 0V$			-0.5	μA
DC Current Gain	G_I	$V_{OUT} = -5V, I_{OUT} = -50\text{mA}$	47			
Input Resistance	R_1		3.29	4.7	6.11	k Ω
Resistance Ratio	R_2/R_1		0.8	1	1.2	
Transition Frequency	f_T	$V_{CE} = -10V, I_E = 5\text{mA}, f = 100\text{MHz}$ (Note)		200		MHz

Note: Transition frequency of the device

■ TYPICAL CHARACTERISTICS



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