



DTB143E

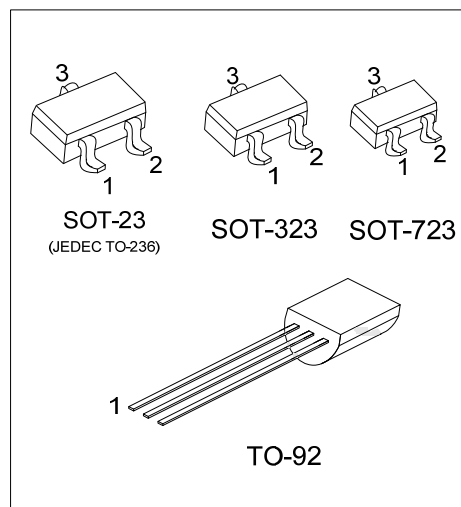
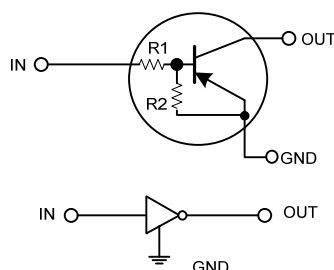
PNP DIGITAL TRANSISTOR

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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



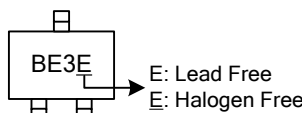
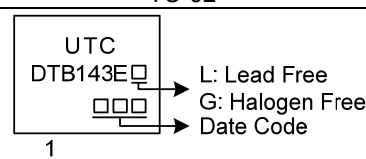
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTB143EL-AE3-R	DTB143EG-AE3-R	SOT-23	I	G	O	Tape Reel
DTB143EL-AL3-R	DTB143EG-AL3-R	SOT-323	I	G	O	Tape Reel
DTB143EL-AQ3-R	DTB143EG-AQ3-R	SOT-723	I	G	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

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

DTB143EG-AE3-R	(1)Packing Type	(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323, AQ3: SOT-723 T92: TO-92 (3) G: Halogen Free and Lead Free, L: Lead Free
	(2)Package Type	
	(3)Green Package	

■ MARKING

SOT-23 / SOT-323 / SOT-723	TO-92
	

■ **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
	SOT-723		125	
	TO-92		625	
Junction Temperature		T_J	+150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

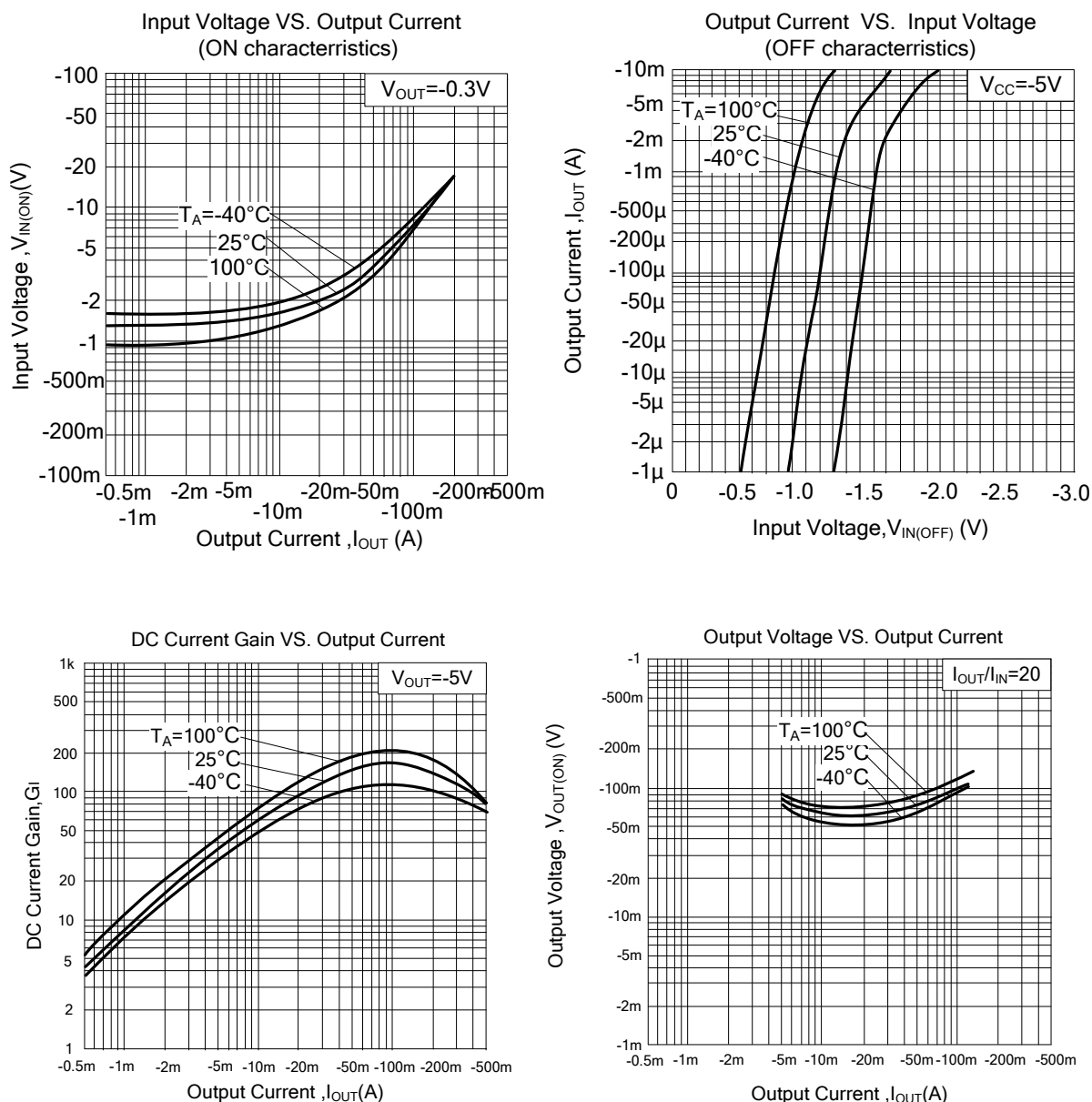
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(OFF)}$	$V_{CC} = -5V, I_{OUT} = 100\mu A$			-0.5	V
	$V_{IN(ON)}$	$V_{OUT} = -0.3V, I_{OUT} = -20mA$	-3			
Output Voltage	$V_{OUT(ON)}$	$I_{OUT}/I_{IN} = -50mA/-2.5mA$			-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	h_{FE}	$V_{OUT} = -5V, I_{OUT} = -50mA$	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	$V_{CE} = -10V, I_E = 5mA, f = 100MHz$ (Note)		200		MHz

Note: Transition frequency of the device.

TYPICAL CHARACTERISTICS



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