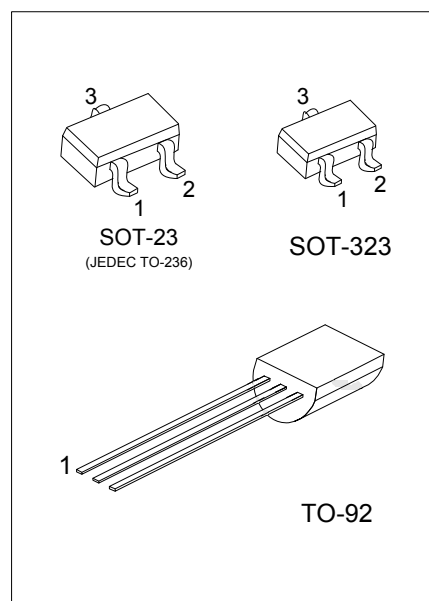
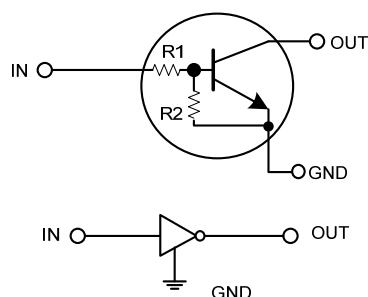


**DTD143E****NPN SILICON TRANSISTOR****DIGITAL TRANSISTORS
(BUILT-IN RESISTORS)****■ FEATURES**

- * 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	
DTD143EL-AE3-R	DTD143EG-AE3-R	SOT-23	I	G	O	Tape Reel
DTD143EL-AE3-R	DTD143EG-AE3-R	SOT-323	I	G	O	Tape Reel
DTD143EL-T92-B	DTD143EG-T92-B	TO-92	G	O	I	Tape Box
DTD143EL-T92-K	DTD143EG-T92-K	TO-92	G	O	I	Bulk

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

DTD143EG-AE3-R (1) Packing Type (2) Package Type (3) Green Package		(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323, T92: TO-92 (3) G: Halogen Free and Lead Free, L: Lead Free
--	--	---

■ MARKING

SOT-23 / SOT-323	TO-92
DE3E E: Lead Free E: Halogen Free	UTC DTD143E 1111 L: Lead Free G: Halogen Free Date Code

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless others specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{CC}	50	V
Input Voltage	V _{IN}	-10 ~ +30	V
Output Current	I _{OUT}	500	mA
Power Dissipation	SOT-23/SOT-323	P _D	200
	TO-92		625
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

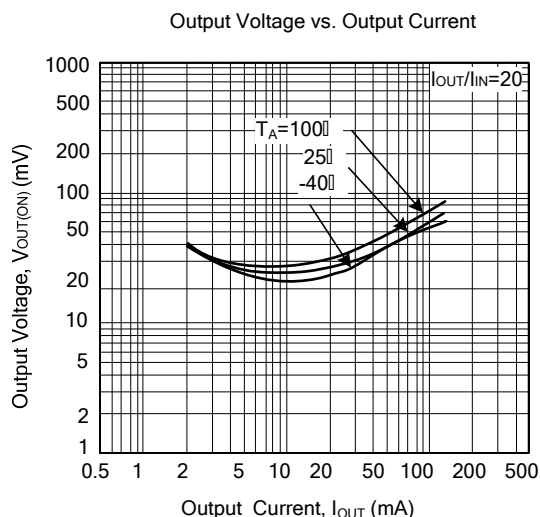
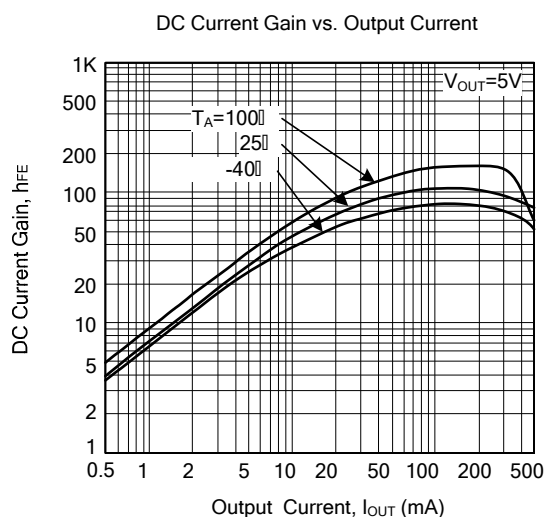
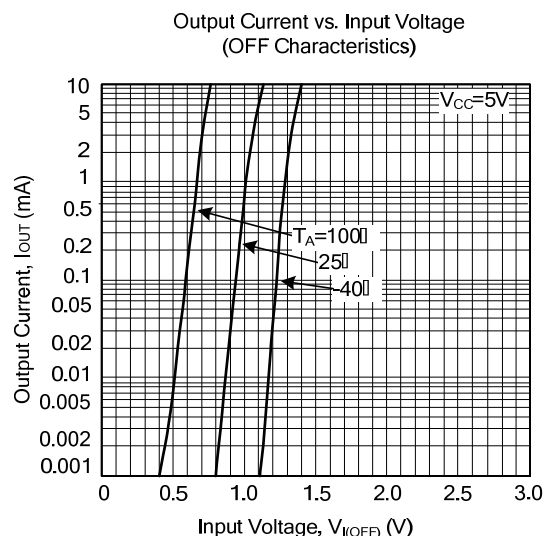
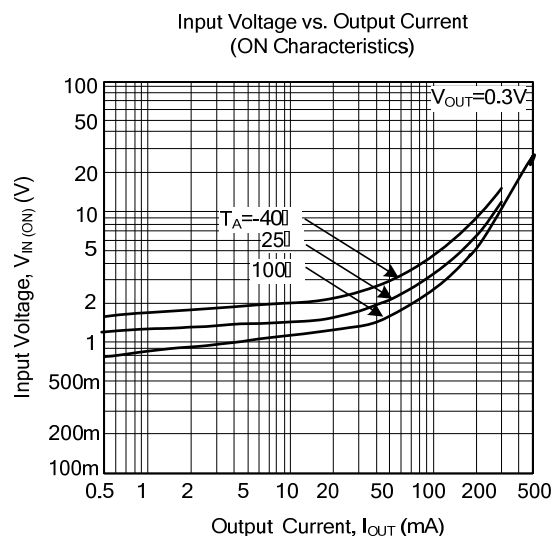
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL SPECIFICATIONS (T_A=25°C, unless others specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V _{IN(OFF)}	V _{CC} = 5V, I _{OUT} = 100μA			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		0.1	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	KΩ
Resistance Ratio	R ₂ /R ₁		0.8	1	1.2	
Transition Frequency	f _T	V _{CE} = 10V, I _E = -50mA, f = 100MHz(Note)		200		MHz

Note: Transition frequency of the device.

TYPICAL CHARACTERISTIC



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.