

DTA144E

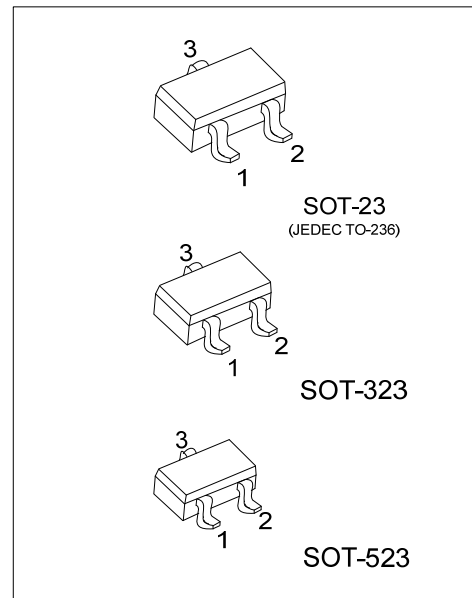
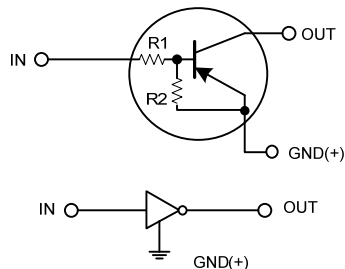
PNP SILICON TRANSISTOR

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



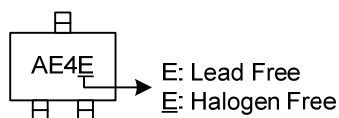
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTA144EL-AE3-R	DTA144EG-AE3-R	SOT-23	I	G	O	Tape Reel
DTA144EL-AL3-R	DTA144EG-AL3-R	SOT-323	I	G	O	Tape Reel
DTA144EL-AN3-R	DTA144EG-AN3-R	SOT-523	I	G	O	Tape Reel

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

DTA144EG-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, AN3: SOT-523 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



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

PARAMETER		SYMBOL	RATING	UNIT
Supply Voltage		V_{CC}	-50	V
Input Voltage		V_{IN}	-40~+10	V
Output Current		I_{OUT}	-30	mA
		$I_{O(MAX)}$	-100	
Power Dissipation	SOT-523	P_D	150	mW
	SOT-23/SOT-323		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.

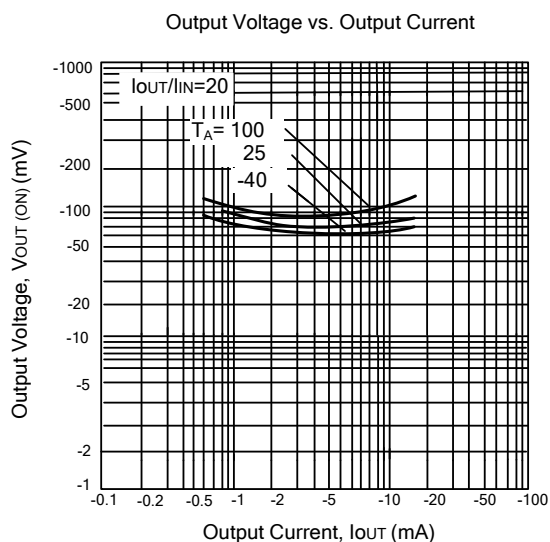
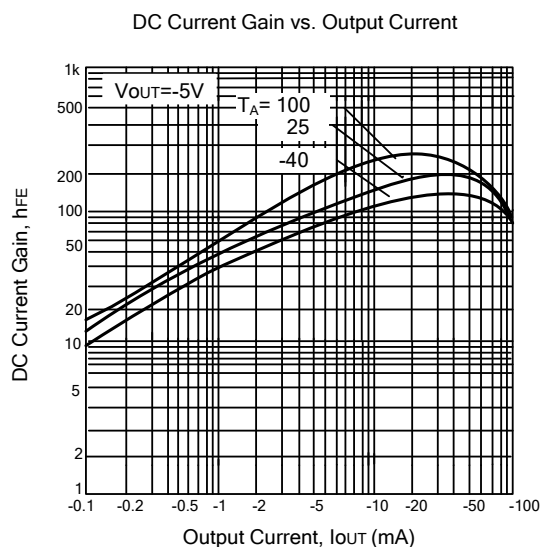
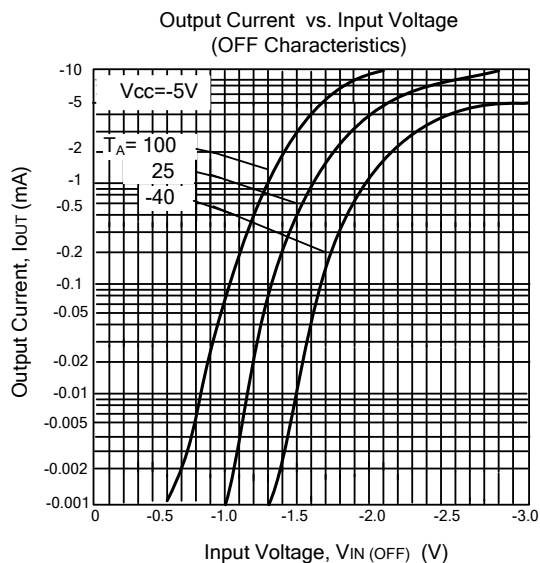
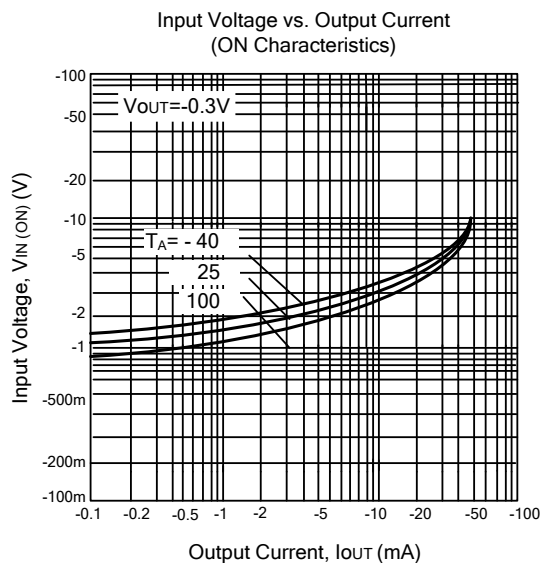
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(OFF)}$	$V_{CC} = -5V, I_{OUT} = -100\mu A$			-0.5	V
	$V_{IN(ON)}$	$V_{OUT} = -0.3V, I_{OUT} = -2mA$	-3			V
Output Voltage	$V_{OUT(ON)}$	$I_{OUT}/I_{IN} = -10mA/-0.5 mA$		-0.1	-0.3	V
Input Current	I_{IN}	$V_{IN} = -5V$			-0.18	mA
Output Current	$I_{OUT(OFF)}$	$V_{CC} = -50V, V_{IN} = 0V$			-0.5	μA
DC Current Gain	h_{FE}	$V_{OUT} = -5V, I_{OUT} = -5mA$	68			
Input Resistance	R_1		32.9	47	61.1	k Ω
Resistance Ratio	R_2/R_1		0.8	1	1.2	
Transition Frequency	f_T	$V_{CE} = -10 V, I_E = 5mA, f = 100MHz$ (Note)		250		MHz

Note: Transition frequency of the device.

■ TYPICAL CHARACTERISTICS



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