



DTA144E

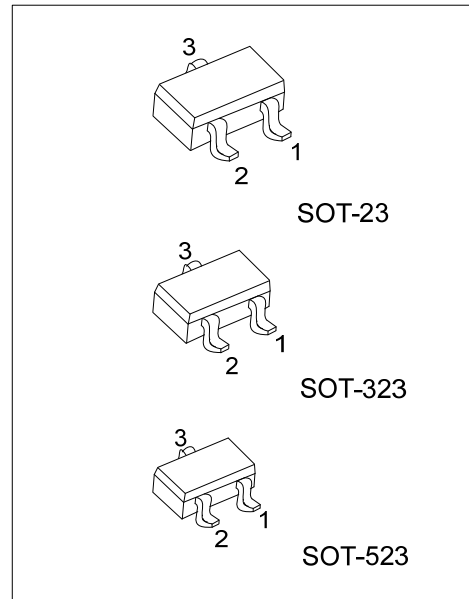
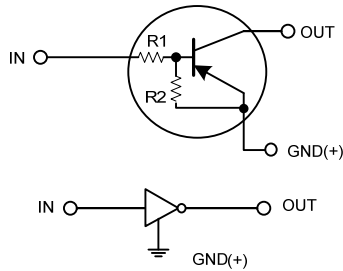
PNP SILICON TRANSISTOR

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

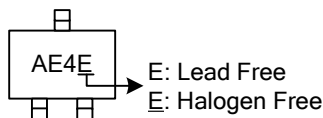


■ ORDERING INFORMATION

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

<p>DTA144EL-AE3-R</p>	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Free</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

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	$^\circ\text{C}$

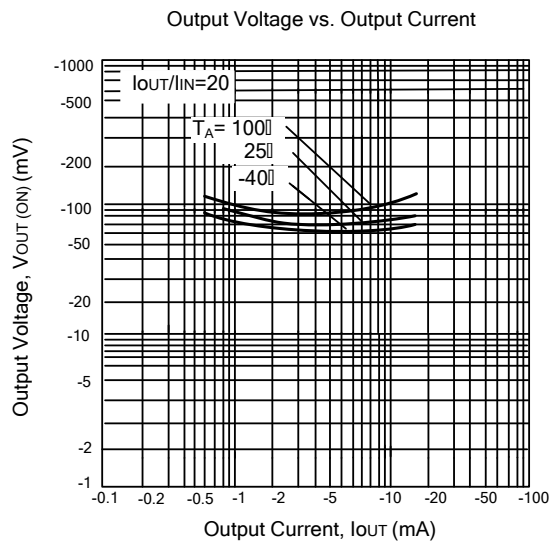
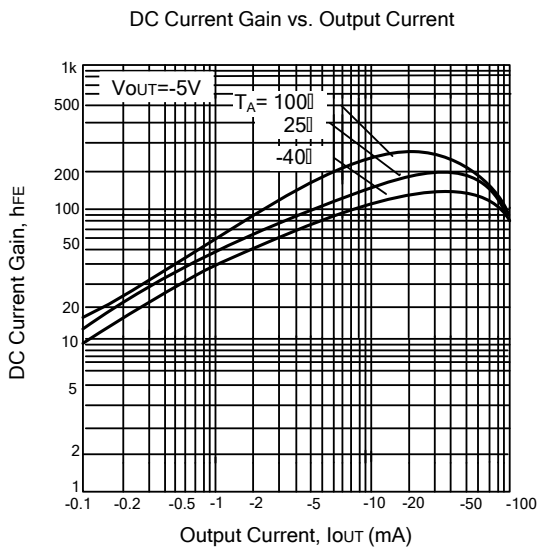
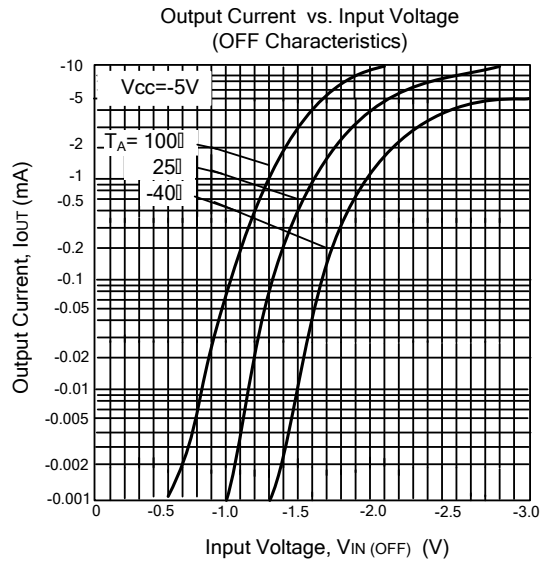
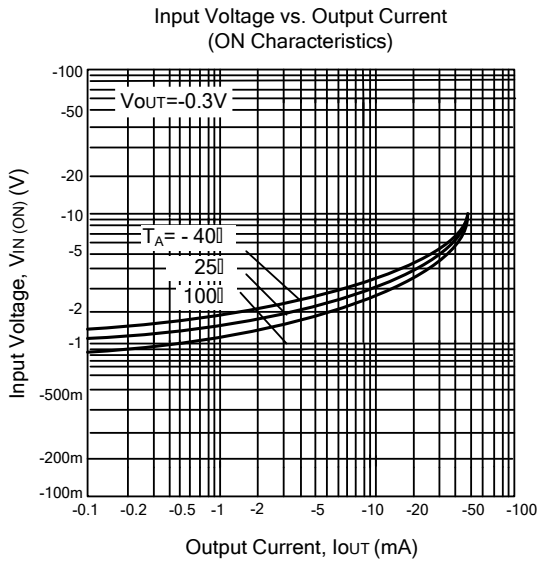
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

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

Note: Transition frequency of the device.

TYPICAL CHARACTERISTICS



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