



# DTA123Y

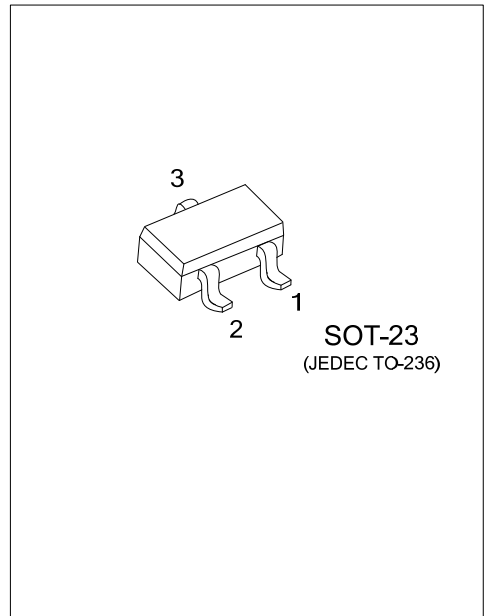
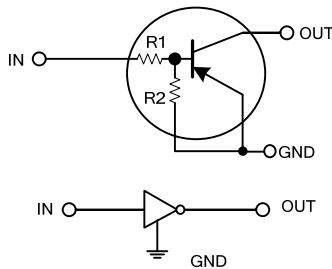
## PNP SILICON TRANSISTOR

### 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



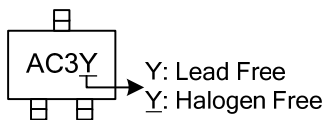
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTA123YL-AE3-R	DTA123YG-AE3-R	SOT-23	G	I	O	Tape Reel

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

<p>DTA123YL-AE3-R</p> <p>(1)Packing Type (2)Package Type (3)Lead Free</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free, L: Lead Free</p>
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#### MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V_{CC}$	-50	V
Input Voltage	$V_{IN}$	-12 ~ +10	V
Output Current	$I_{OUT}$	-100	mA
	$I_{C(MAX)}$	-100	
Power Dissipation	$P_D$	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 SPECIFICATIONS ( $T_A=25^\circ\text{C}$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(OFF)}$	$V_{CC} = -5V, I_{OUT} = -100\mu\text{A}$			-0.3	V
	$V_{IN(ON)}$	$V_{OUT} = -0.3V, I_{OUT} = -20\text{mA}$	-3			
Output Voltage	$V_{OUT(ON)}$	$I_{OUT}/I_{IN} = -10\text{mA}/-0.5\text{mA}$			-0.3	V
Input Current	$I_{IN}$	$V_{IN} = -5V$			-3.8	mA
Output Current	$I_{OUT(OFF)}$	$V_{CC} = -50V, V_{IN} = 0V$			-0.5	$\mu\text{A}$
DC Current Gain	$G_{IN}$	$V_{OUT} = -5V, I_{OUT} = -10\text{mA}$	33			
Input Resistance	$R_1$		1.54	2.2	2.86	K $\Omega$
Resistance Ratio	$R_2/R_1$		3.6	4.5	5.5	
Transition Frequency	$f_T$	$V_{CE} = -10V, I_E = -5\text{mA}, f = 100\text{MHz}$ (Note)		250		MHz

Note: Transition frequency of the device

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