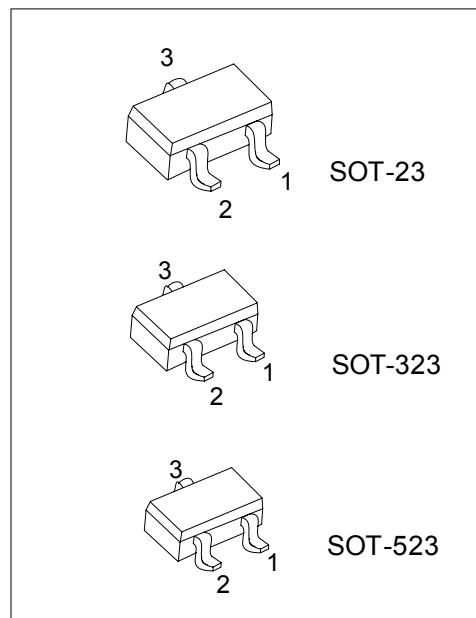
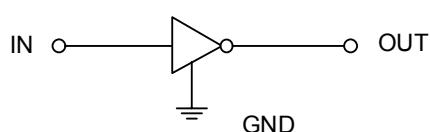
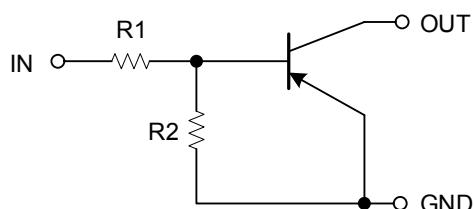


## DTA123E

PNP EPITAXIAL SILICON TRANSISTOR

**DIGITAL TRANSISTORS  
(BUILT-IN BIAS RESISTORS)****■ FEATURES**

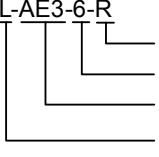
- \* Built-in bias resistors that implies easy ON/OFF applications.
- \* The bias resistors are thin-film resistors with complete isolation to allow positive input.

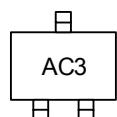
**■ EQUIVALENT CIRCUIT**

\*Pb-free plating product number: DTA123EL

**■ ORDERING INFORMATION**

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
DTA123E-AE3-6-R	DTA123EL-AE3-6-R	SOT-23	G	I	O	Tape Reel
DTA123E-AL3-6-R	DTA123EL-AL3-6-R	SOT-323	G	I	O	Tape Reel
DTA123E-AN3-6-R	DTA123EL-AN3-6-R	SOT-523	G	I	O	Tape Reel

 DTA123EL-AE3-6-R	(1) Packing Type (2) Pin Assignment (3) Package Type (4) Lead Plating	(1) R: Tape Reel (2) refer to Pin Assignment (3) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523 (4) L: Lead Free Plating, Blank: Pb/Sn
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**■ MARKING**

## ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER		SYMBOL	RATINGS		UNIT
Supply Voltage		V <sub>CC</sub>	-50		V
Input Voltage		V <sub>IN</sub>	-12 ~ +10		V
Output Current		I <sub>OUT</sub>	-100		mA
Power Dissipation	SOT-523	P <sub>D</sub>	150		mW
	SOT-23/SOT-323		200		mW
Junction Temperature		T <sub>J</sub>	+150		°C
Storage Temperature		T <sub>STG</sub>	-55 ~ +150		°C

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

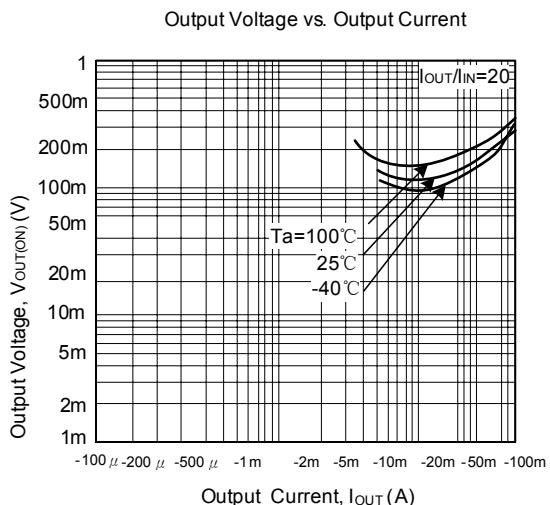
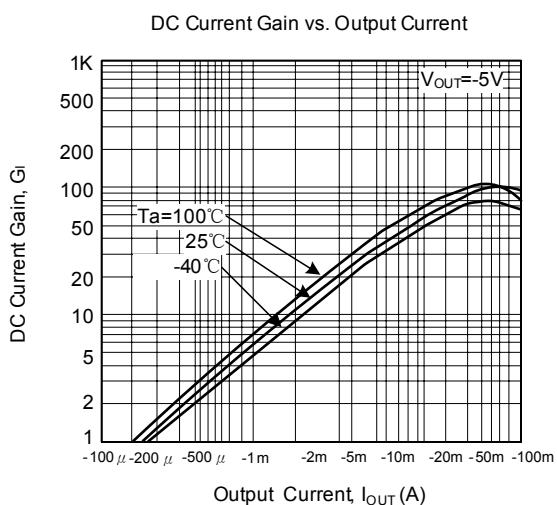
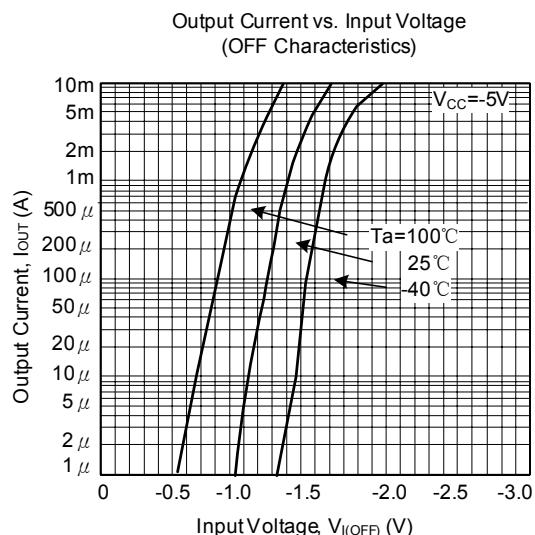
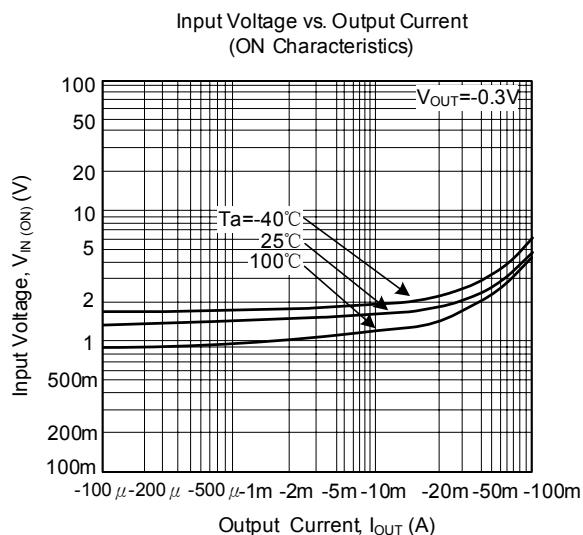
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ ELECTRICAL SPECIFICATIONS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V <sub>IN(OFF)</sub>	V <sub>CC</sub> = -5V, I <sub>OUT</sub> = -100µA			-0.5	V
	V <sub>IN(ON)</sub>	V <sub>OUT</sub> = -0.3V, I <sub>OUT</sub> = -20mA	-3			
Output Voltage	V <sub>OUT(ON)</sub>	I <sub>OUT</sub> /I <sub>IN</sub> = 10mA/-0.5mA		-0.1	-0.3	V
Input Current	I <sub>IN</sub>	V <sub>IN</sub> = -5V			-3.8	mA
Output Current	I <sub>OUT(OFF)</sub>	V <sub>CC</sub> = -50V, V <sub>IN</sub> = 0V			-0.5	µA
DC Current Gain	G <sub>IN</sub>	V <sub>OUT</sub> = -5V, I <sub>OUT</sub> = -20mA	20			
Input Resistance	R <sub>1</sub>		1.54	2.2	2.86	KΩ
Resistance Ratio	R <sub>2</sub> /R <sub>1</sub>		0.8	1	1.2	
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>E</sub> = -5mA, f = 100MHz *		250		MHz

\* Transition frequency of the device

## ■ TYPICAL CHARACTERISTIC



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