



# DTA114E

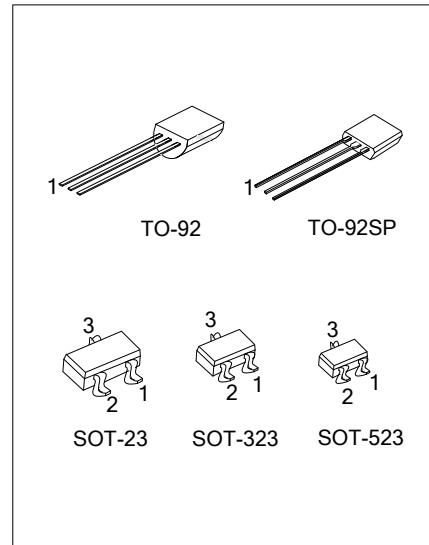
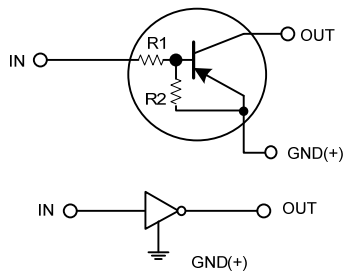
## PNP SILICON TRANSISTOR

### DIGITAL TRANSISTOR (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	
-	DTA114EG-AE3-R	SOT-23	G	I	O	Tape Reel
-	DTA114EG-AL3-R	SOT-323	G	I	O	Tape Reel
-	DTA114EG-AN3-R	SOT-523	G	I	O	Tape Reel
DTA114EL-T92-B	DTA114EG-T92-B	TO-92	G	O	I	Tape Box
DTA114EL-T92-K	DTA114EG-T92-K	TO-92	G	O	I	Bulk
DTA114EL-T9S-K	DTA114EG-T9S-K	TO-92SP	G	O	I	Bulk

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

<p>DTA114EG-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box, K: Bulk (2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523, T92: TO-92, T9S: TO-92SP (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-23 / SOT-323 / SOT-523	TO-92 / TO-92SP
	<p>UTC DTA114E 1</p> <p>L: Lead Free G: Halogen Free Data Code</p>

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

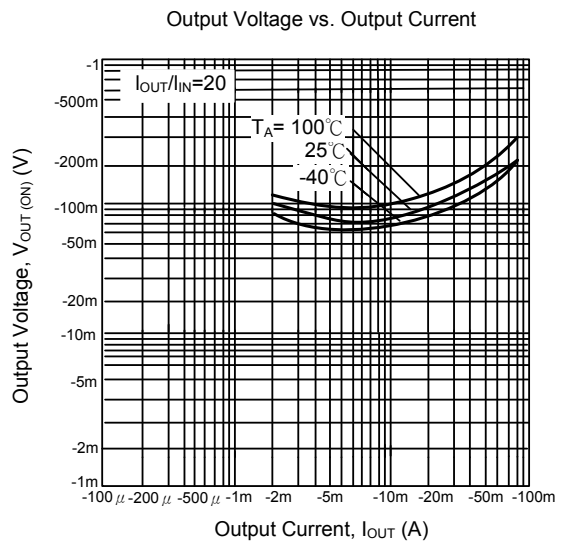
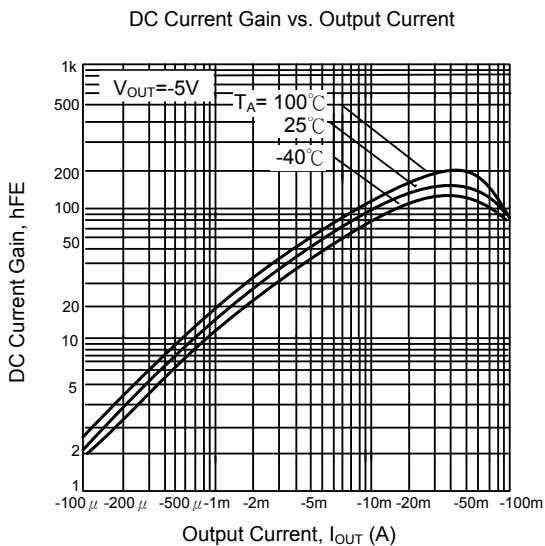
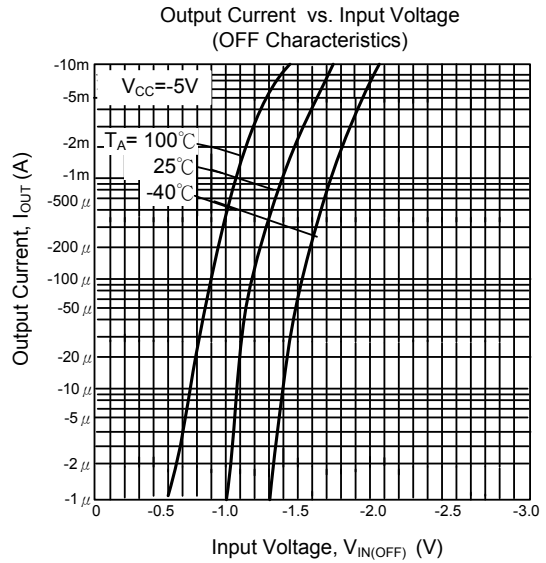
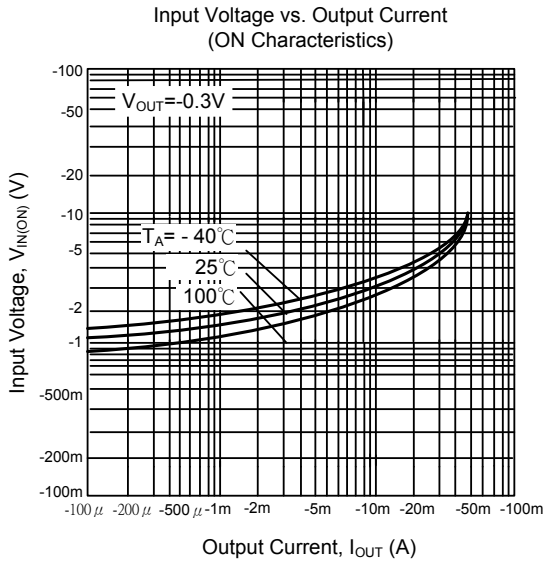
PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		$V_{CC}$	-50	V
Input Voltage		$V_{IN}$	-40 ~ +10	V
Output Current		$I_{OUT(MAX)}$	-100	mA
Power Dissipation	SOT-523	$P_D$	150	mW
	SOT-23/SOT-323		200	mW
	TO-92		625	mW
	TO-92SP		550	mW
Junction Temperature		$T_J$	150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-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
<b>OFF CHARACTERISTICS</b>						
Input Voltage	$V_{IN(OFF)}$	$V_{CC} = -5V, I_{OUT} = -100\mu\text{A}$			-0.5	V
	$V_{IN(ON)}$	$V_{OUT} = -0.3V, I_{OUT} = -10\text{mA}$	-3			
Output Voltage	$V_{OUT(ON)}$	$I_{OUT}/I_{IN} = -10\text{mA}/-0.5\text{mA}$			-0.3	V
Input Current	$I_{IN}$	$V_{IN} = -5V$			-0.88	mA
Output Current	$I_{OUT(OFF)}$	$V_{CC} = -50V, V_{IN} = 0V$			-0.5	$\mu\text{A}$
<b>ON CHARACTERISTICS</b>						
DC Current Gain	$h_{FE}$	$V_{OUT} = -5V, I_{OUT} = -5\text{mA}$	30			
<b>SMALL SIGNAL CHARACTERISTICS</b>						
Input Resistance	$R_1$		7	10	13	k $\Omega$
Resistance Ratio	$R_2/R_1$		0.8	1	1.2	
Transition Frequency	$f_T$	$V_{CE} = -10V, I_E = 5\text{mA}, f = 100\text{MHz}$		250		MHz

## TYPICAL CHARACTERISTICS



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