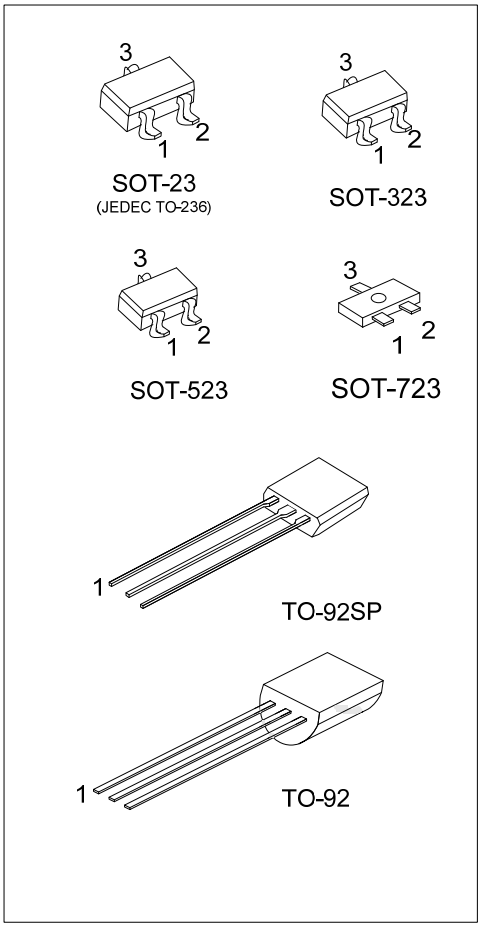
DTA114E

PNP SILICON TRANSISTOR

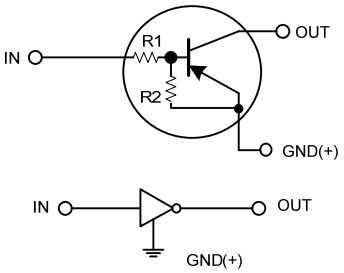
DIGITAL TRANSISTOR (BUILT- IN BIAS RESISTORS)



■ 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

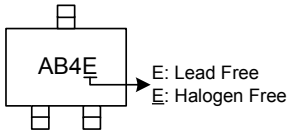
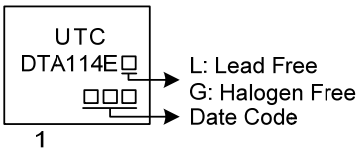
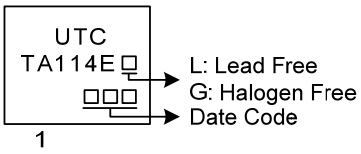
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTA114EL-AE3-R	DTA114EG-AE3-R	SOT-23	I	G	O	Tape Reel
DTA114EL-AL3-R	DTA114EG-AL3-R	SOT-323	I	G	O	Tape Reel
DTA114EL-AN3-R	DTA114EG-AN3-R	SOT-523	I	G	O	Tape Reel
DTA114EL-AQ3-R	DTA114EG-AQ3-R	SOT-723	I	G	O	Tape Reel
DTA114EL-T92-B	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: I: IN G: GND O: OUT

DTA114EG-AE3-R
(1)Packing Type
(2)Package Type
(3)Green Package

(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

■ MARKING

SOT-23 / SOT-323 SOT-523 / SOT-723	TO-92	TO-92SP
		

■ ABSOLUATE MAXIUM RATINGS (T_A= 25℃, 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-23/SOT-323	P_D	200	mW
	SOT-523		150	mW
	SOT-723		100	mW
	TO-92		625	mW
	TO-92SP		550	mW
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

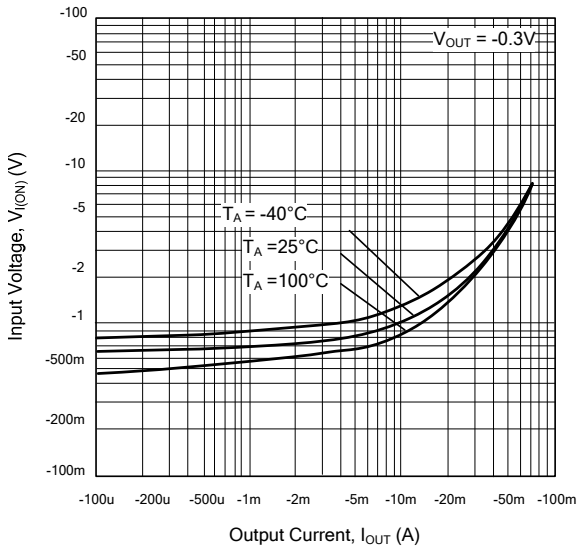
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A= 25℃, unless otherwise specified.)

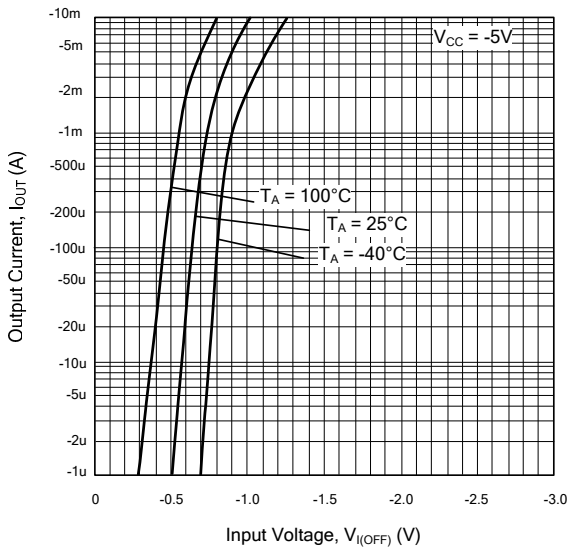
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Input Voltage	$V_{IN(OFF)}$	V_{CC}= -5V, I_{OUT}= -100μA			-0.5	V
	$V_{IN(ON)}$	V_{OUT}= -0.3V, I_{OUT}= -10mA	-3			
Output Voltage	$V_{OUT(ON)}$	I_{OUT}/I_{IN}= -10mA/-0.5mA			-0.3	V
Input Current	I_{IN}	V_{IN}= -5V			-0.88	mA
Output Current	$I_{OUT(OFF)}$	V_{CC}= -50V , V_{IN}=0V			-0.5	μA
ON CHARACTERISTICS						
DC Current Gain	h_{FE}	V_{OUT}= -5V, I_{OUT}= -5mA	30			
SMALL SIGNAL CHARACTERISTICS						
Input Resistance	R_1		7	10	13	kΩ
Resistance Ratio	R_2/R_1		0.8	1	1.2	
Transition Frequency	f_T	V_{CE}= -10 V, I_E=5mA, f=100MHz		250		MHz

■ TYPICAL CHARACTERISTICS

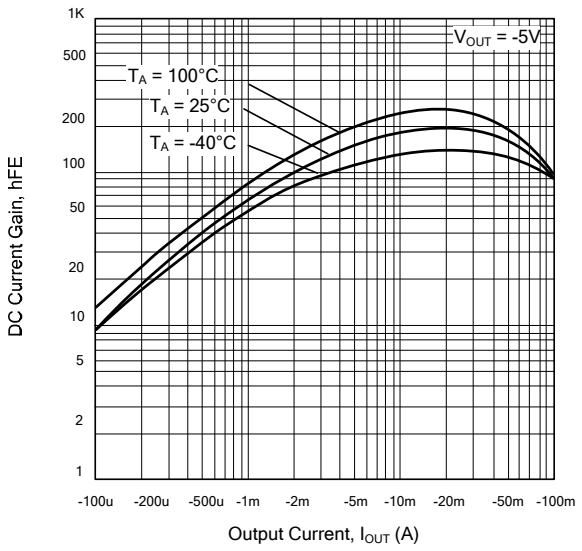
Input Voltage vs. Output Current
(ON Characteristics)



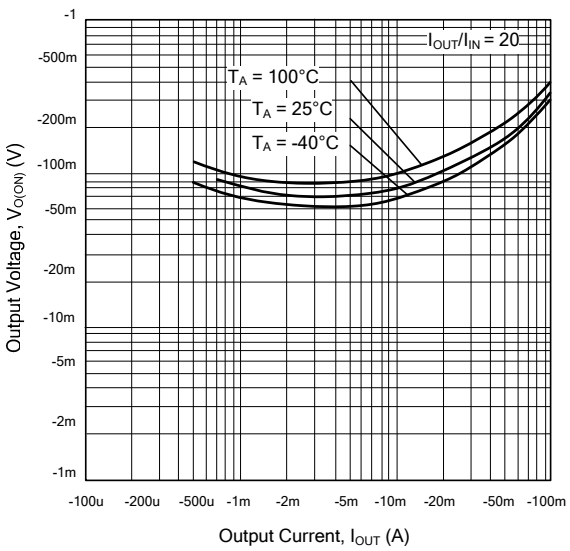
Output Current vs. Input Voltage
(OFF Characteristics)



DC Current Gain vs. Output Current



Output Voltage vs. Output Current



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