



DTA114E

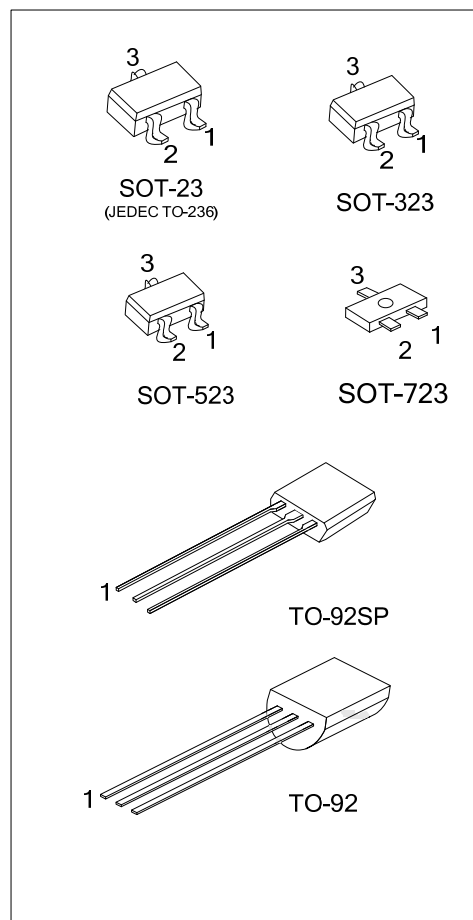
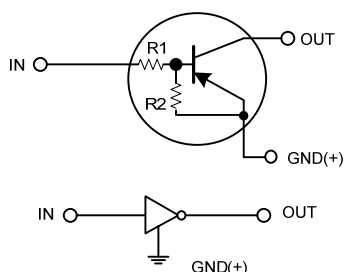
PNP SILICON TRANSISTOR

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	G	I	O	Tape Reel
DTA114EL-AL3-R	DTA114EG-AL3-R	SOT-323	G	I	O	Tape Reel
DTA114EL-AN3-R	DTA114EG-AN3-R	SOT-523	G	I	O	Tape Reel
DTA114EL-AQ3-R	DTA114EG-AQ3-R	SOT-723	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

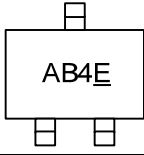
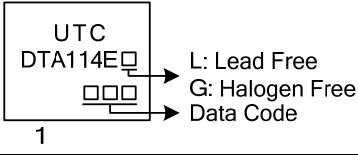
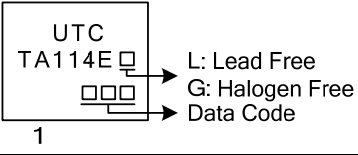
Note: Pin assignment: G: GND I: IN O: OUT

<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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PNP SILICON TRANSISTOR

MARKING

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

■ ABSOLUTE MAXIMUM RATINGS (T_A= 25°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-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

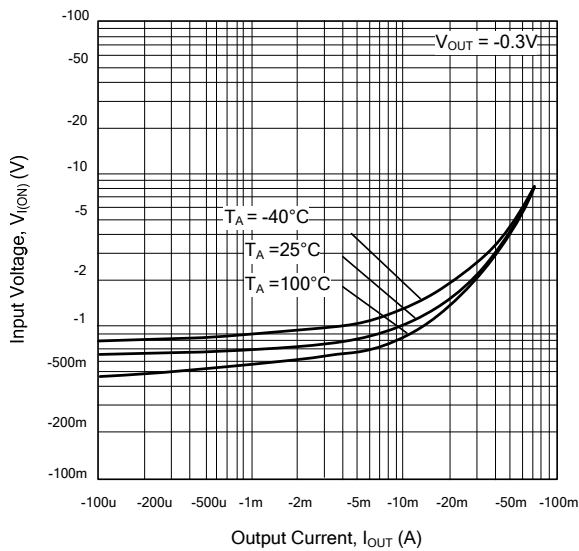
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

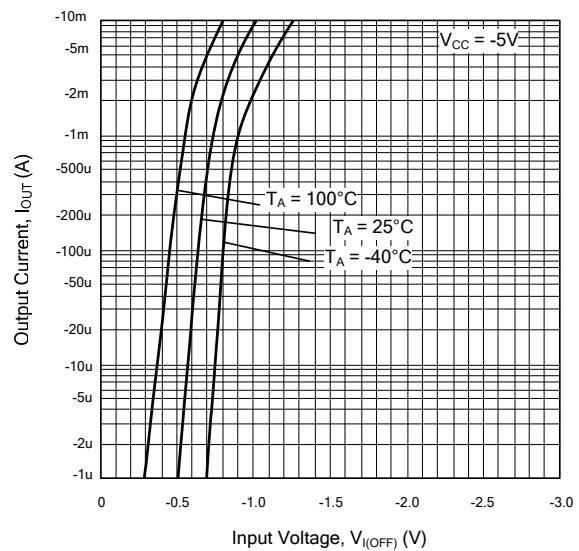
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Input Voltage	V _{IN(OFF)}	V _{CC} = -5V, I _{OUT} = -100μA			-0.5	V
	V _{IN(ON)}	V _{OUT} = -0.3V, I _{OUT} = -10mA	-3			
Output Voltage	V _{OUT(ON)}	I _{OUT} /I _{IN} = -10mA/-0.5mA			-0.3	V
Input Current	I _{IN}	V _{IN} = -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

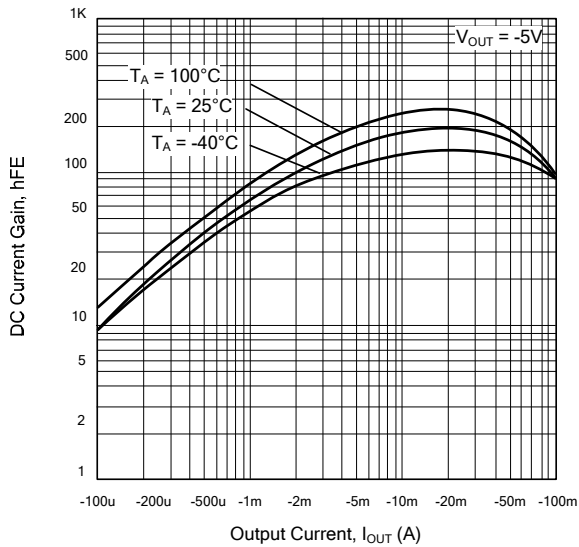
Input Voltage vs. Output Current
(ON Characteristics)



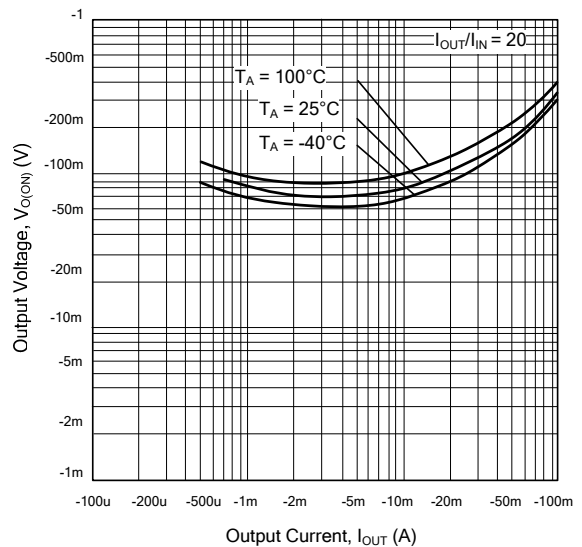
Output Current vs. Input Voltage
(OFF Characteristics)



DC Current Gain vs. Output Current



Output Voltage vs. Output Current



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