



DTA114Y

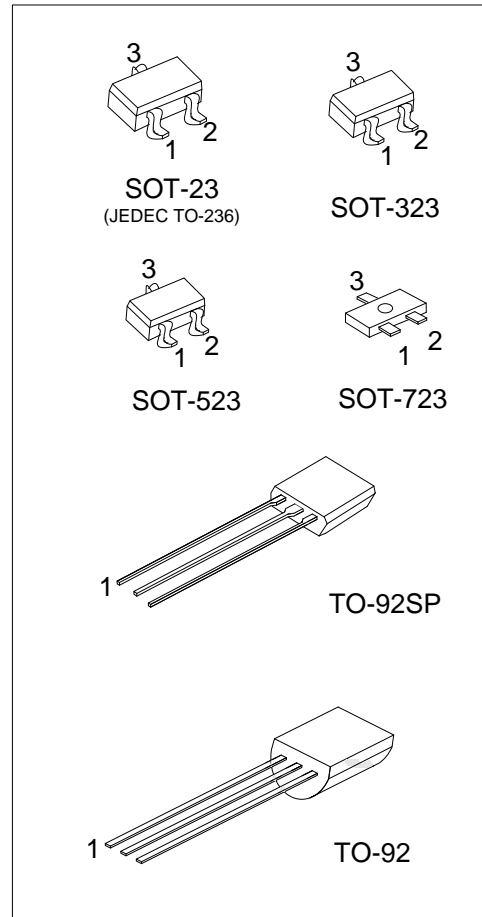
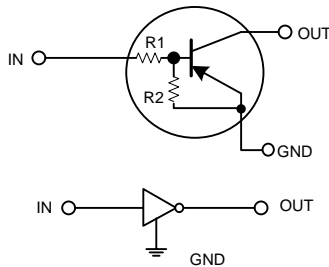
PNP SILICON TRANSISTOR

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



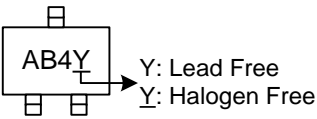
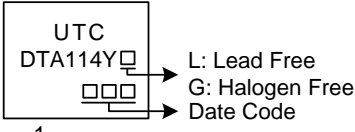
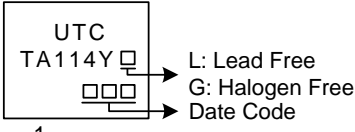
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTA114YL-AE3-R	DTA114YG-AE3-R	SOT-23	I	G	O	Tape Reel
DTA114YL-AL3-R	DTA114YG-AL3-R	SOT-323	I	G	O	Tape Reel
DTA114YL-AN3-R	DTA114YG-AN3-R	SOT-523	I	G	O	Tape Reel
DTA114YL-AQ3-R	DTA114YG-AQ3-R	SOT-723	I	G	O	Tape Reel
DTA114YL-T92-K	DTA114YG-T92-K	TO-92	G	O	I	Bulk
DTA114YL-T92-B	DTA114YG-T92-B	TO-92	G	O	I	Tape Box
DTA114YL-T9S-K	DTA114YG-T9S-K	TO-92SP	G	O	I	Bulk
DTA114YL-T9S-B	DTA114YG-T9S-B	TO-92SP	G	O	I	Tape Box

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

<p>DTA114YG-AE3-R</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel</p> <p>(2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523, AQ3: SOT-723, T92: TO-92, T9S: TO-92SP</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING

SOT-23 / SOT-323 SOT-523 / SOT-723	TO-92	TO-92SP
 <p>AB4Y</p> <p>Y: Lead Free Y: Halogen Free</p>	 <p>UTC DTA114Y</p> <p>L: Lead Free G: Halogen Free Date Code</p> <p>1</p>	 <p>UTC TA114Y</p> <p>L: Lead Free G: Halogen Free Date Code</p> <p>1</p>

■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless others specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V _{CC}	-50	V
Input Voltage		V _{IN}	-40~+6	V
Output Current		I _{OUT}	-70	mA
		I _{C(MAX)}	-100	mA
Power Dissipation	SOT-23/SOT-323	P _D	410	mW
	SOT-523		390	mW
	SOT-723		375	mW
	TO-92		680	mW
	TO-92SP		660	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.

■ THERMAL DATA (NOTE)

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-23	θ _{JA}	302	°C/W
	SOT-323		315	°C/W
	SOT-523		318	°C/W
	SOT-723		333	°C/W
	TO-92		183	°C/W
	TO-92SP		190	°C/W
Junction to Case	SOT-23	θ _{JC}	130	°C/W
	SOT-323		143	°C/W
	SOT-523		145	°C/W
	SOT-723		155	°C/W
	TO-92		89	°C/W
	TO-92SP		95	°C/W

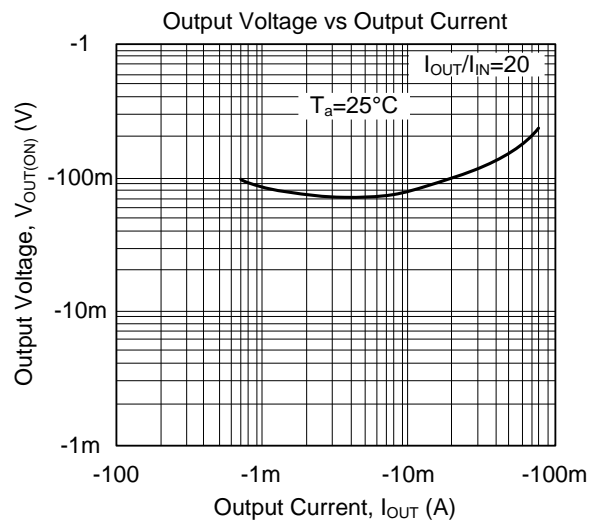
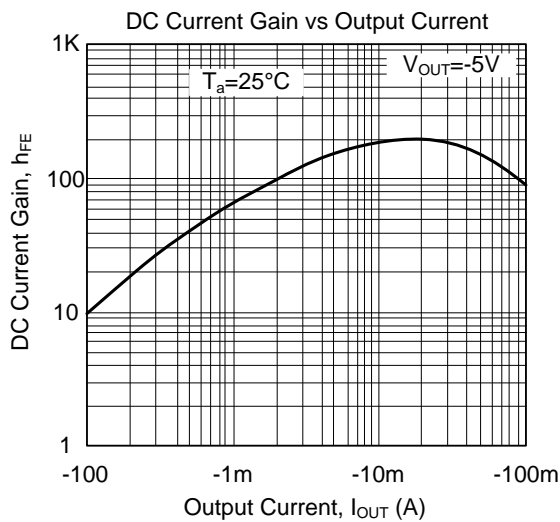
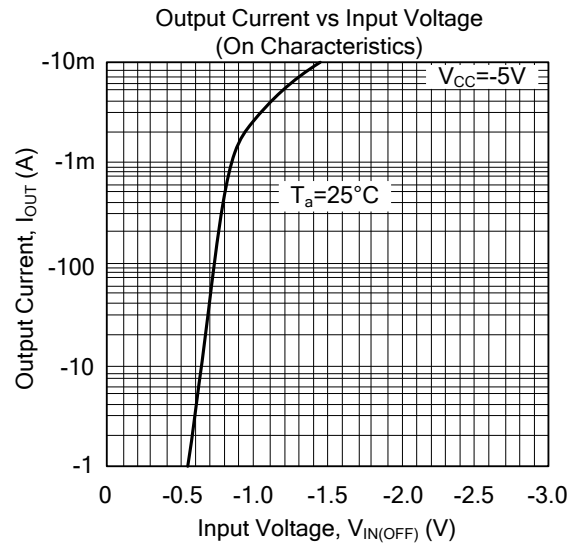
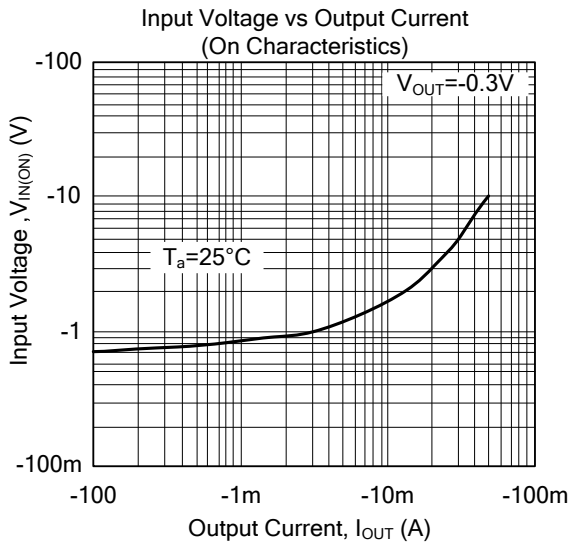
Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V _{IN(OFF)}	V _{CC} =-5V, I _{OUT} =-100μA			-0.3	V
	V _{IN(ON)}	V _{OUT} =-0.3V, I _{OUT} =-1mA	-1.4			V
Output Voltage	V _{OUT(ON)}	I _{OUT} /I _{IN} =-5mA/-0.25mA		-0.1	-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
DC Current Gain	h _{FE}	V _{OUT} =-5V, I _{OUT} =-5mA	68			
Input Resistance	R ₁		7	10	13	KΩ
Resistance Ratio	R ₂ /R ₁		3.7	4.7	5.7	
Transition Frequency	f _T	V _{CE} =-10V, I _E =5mA, f=100MHz(Note)		250		MHz

Note: Transition frequency of the device.

■ TYPICAL CHARACTERISTICS



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