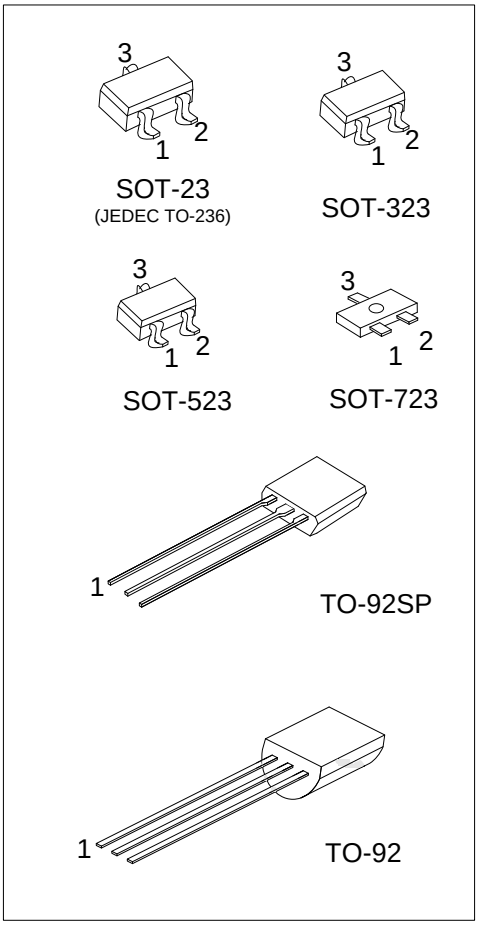
DTA114Y

PNP SILICON TRANSISTOR

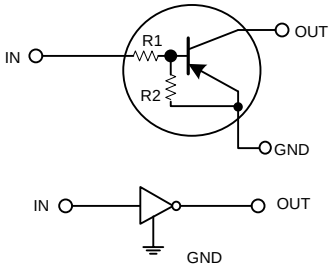
DIGITAL TRANSISTOR (BUILT- IN BIAS RESISTORS)



■ 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

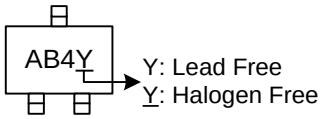
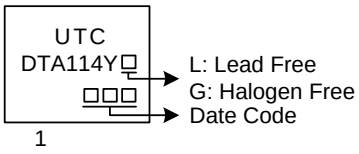
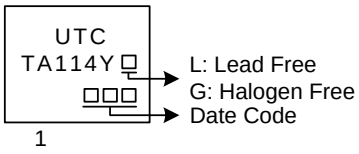
DTA114YG-AE3-R
(1)Packing Type
(2)Package Type
(3)Green Package

(1) B: Tape Box, K: Bulk, R: Tape Reel

(2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523, AQ3: SOT-723, 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
		

■ 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