



UD3K

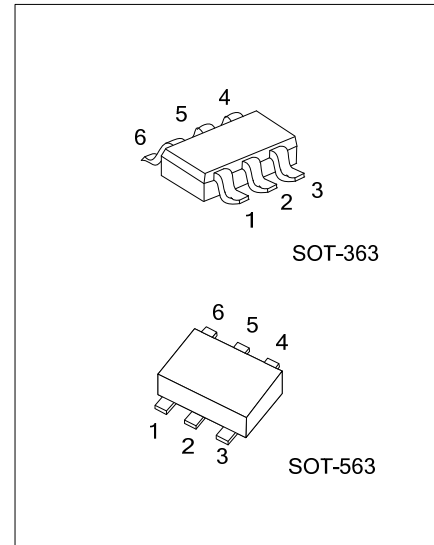
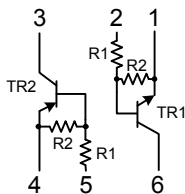
DUAL TRANSISTOR

GENERAL PURPOSE (DUAL DIGITAL TRANSISTOR)

■ FEATURES

- * Both the DTA114E chip and DTC114E chip in a SOT-363 package.
- * NPN/PNP silicon transistor(Built-in resistor type)

■ EQUIVALENT CIRCUIT



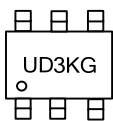
■ ORDERING INFORMATION

Ordering Number	Package	Pin Assignment						Packing
		1	2	3	4	5	6	
UD3KG-AL6-R	SOT-363	E1	B1	C2	E2	B2	C1	Tape Reel
UD3KG-AN6-R	SOT-563	E1	B1	C2	E2	B2	C1	Tape Reel

Note: Pin Assignment: E: Emitter B: Base C: Collector

<p>UD3KG-AL6-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AL6: SOT-363, AN6: SOT-563</p> <p>(3) G: Halogen Free and Lead Free</p>
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■ MARKING



The following characteristics apply to Both TR1 and TR2, however, the “-“ sign on TR2 values for the PNP type have been omitted.

■ 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}	-10	V
			40	V
Output Current		I_{OUT}	50	mA
		$I_{C(MAX)}$	100	mA
Total Power Dissipation (120mW per element must not be exceeded)	SOT-363	P_D	150	mW
	SOT-563		120	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.

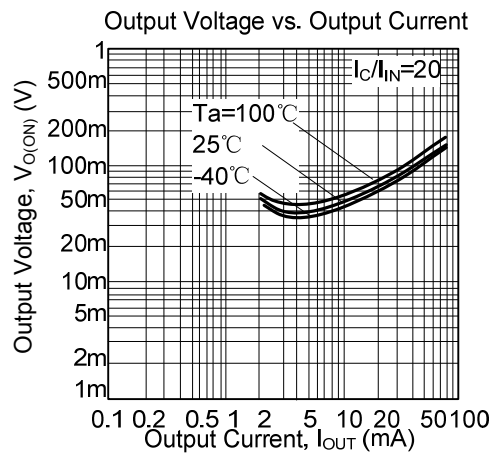
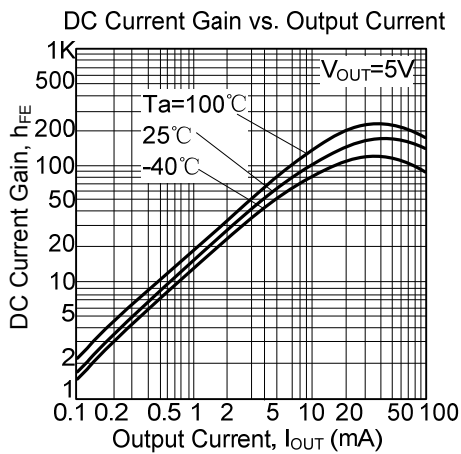
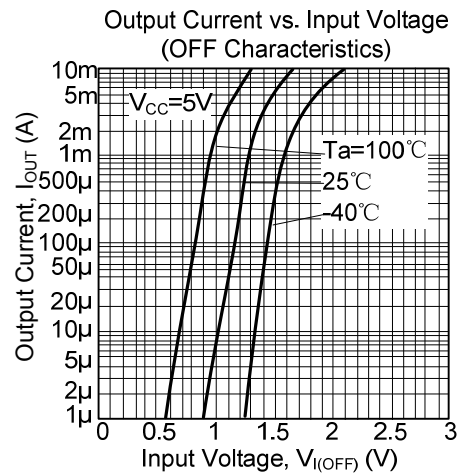
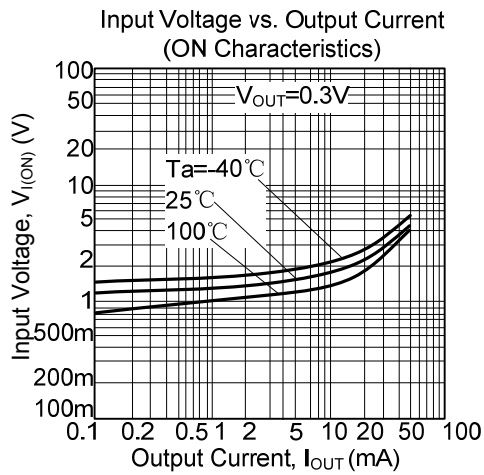
■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(OFF)}$	$V_{CC}=5\text{V}$, $I_{OUT}=100\mu\text{A}$			0.5	V
	$V_{I(ON)}$	$V_{OUT}=0.3\text{V}$, $I_{OUT}=10\text{mA}$	3			V
Output Voltage	$V_{O(ON)}$	$I_{OUT}=10\text{mA}$, $I_{IN}=0.5\text{mA}$		0.1	0.3	V
Input Current	I_{IN}	$V_{IN}=5\text{V}$			0.88	mA
Output Current	$I_{O(OFF)}$	$V_{CC}=50\text{V}$, $V_{IN}=0\text{V}$			0.5	μA
DC Current Gain	h_{FE}	$V_{OUT}=5\text{V}$, $I_{OUT}=5\text{mA}$	30			
Transition Frequency	f_T	$V_{CE}=10\text{V}$, $I_E=-5\text{mA}$, $f=100\text{MHz}$ (Note)		250		MHz
Input Resistance	R_1	$V_{CE}/I_C=5\text{V}/1\text{mA}$	7	10	13	K Ω
Resistance Ratio	R_2/R_1		0.8	1	1.2	

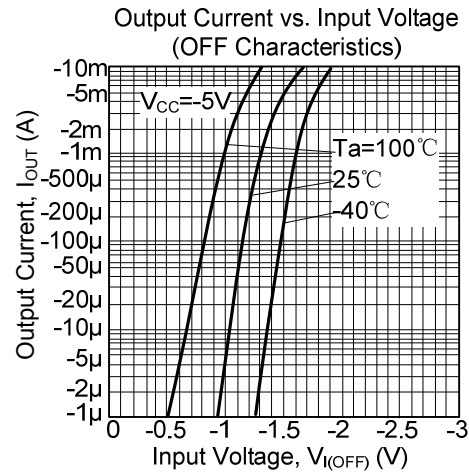
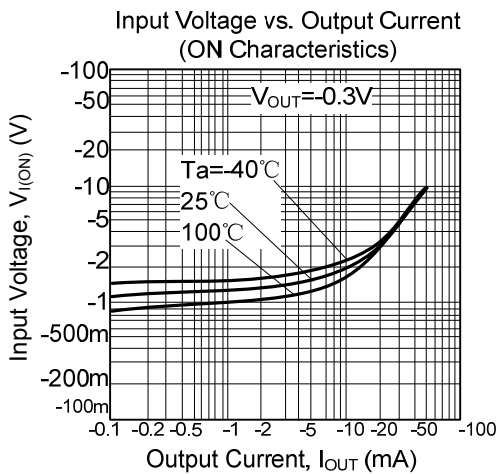
Note: Transition Frequency of the Device

TYPICAL CHARACTERISTICS

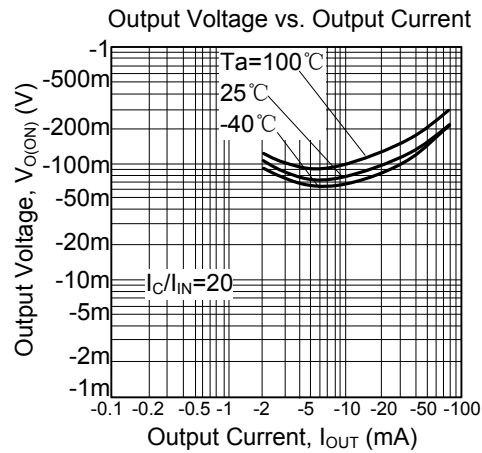
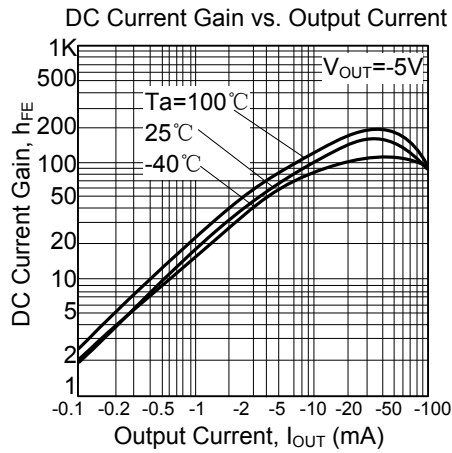
TR₁ (NPN)



TR₂ (PNP)



■ TYPICAL CHARACTERISTICS(Cont.)



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