



UD3K

DUAL TRANSISTOR

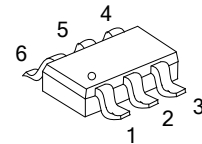
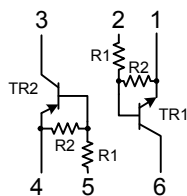
GENERAL PURPOSE (DUAL DIGITAL TRANSISTOR)

■ FEATURES

* Both the DTA114E chip and DTC114E chip in a SOT-363 package.

* NPN/PNP silicon transistor(Built-in resistor type)

■ EQUIVALENT CIRCUIT



SOT-363

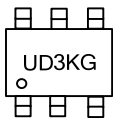
■ ORDERING INFORMATION

Ordering Number	Package	Pin Assignment						Packing
		1	2	3	4	5	6	
UD3KG-AL6-R	SOT-363	G	I	O	G	I	O	Tape Reel

Note: G: GND, I: Input, O: Output

UD3KG-AL6-R	(1) Packing Type	(1) R: Tape Reel
	(2) Package Type	(2) AL6: SOT-363
	(3) Halogen Free	(3) G: Halogen Free

■ 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 (Ta=25°C)

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)	P_D	150	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.

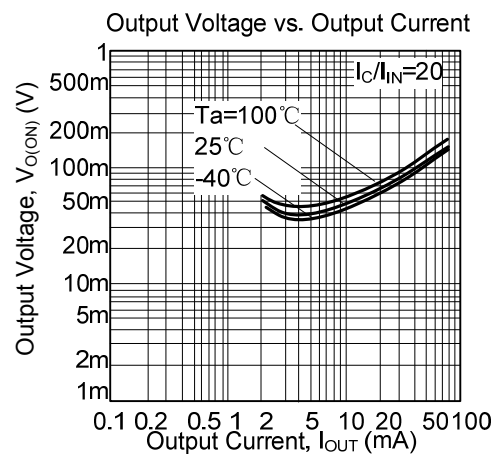
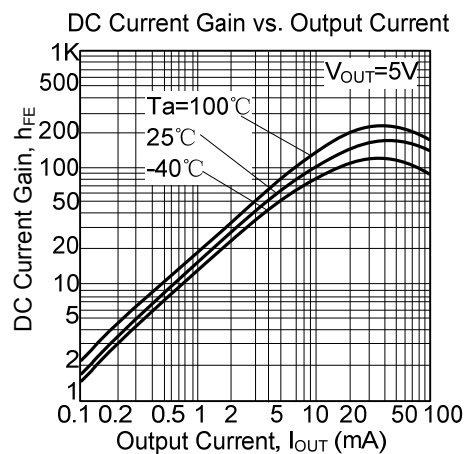
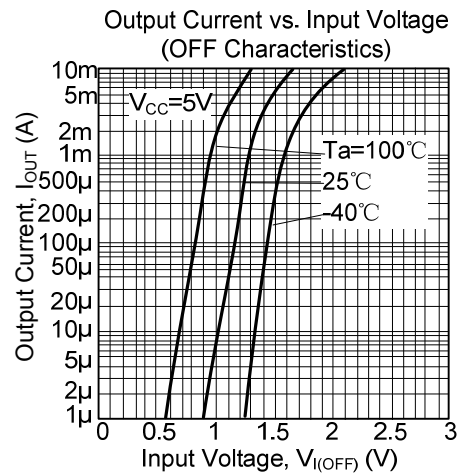
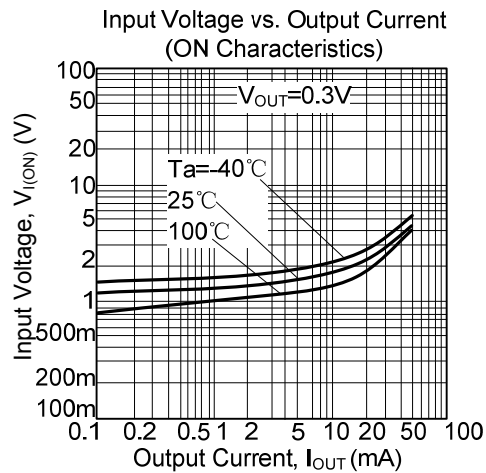
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

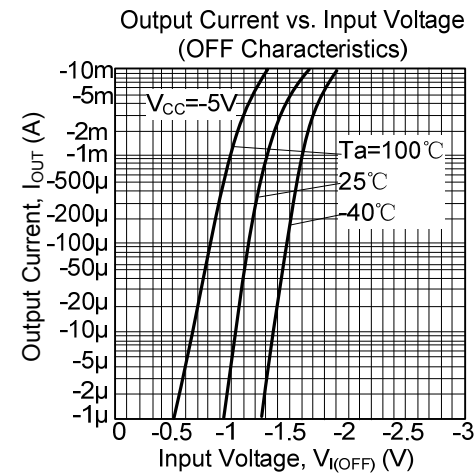
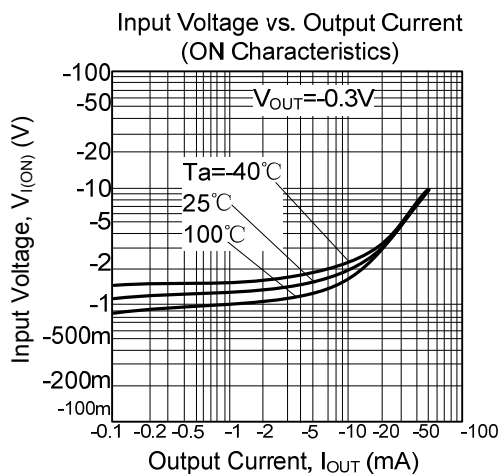
Note: Transition Frequency of the Device

TYPICAL CHARACTERISTICS

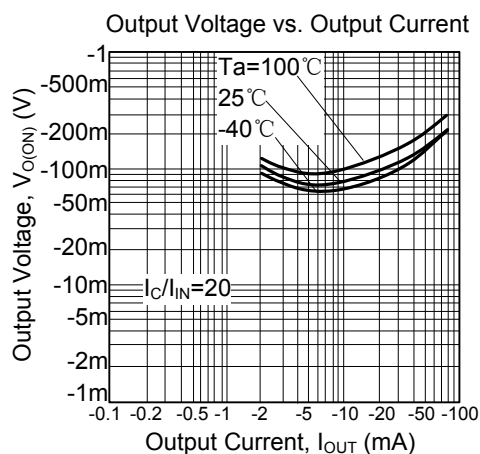
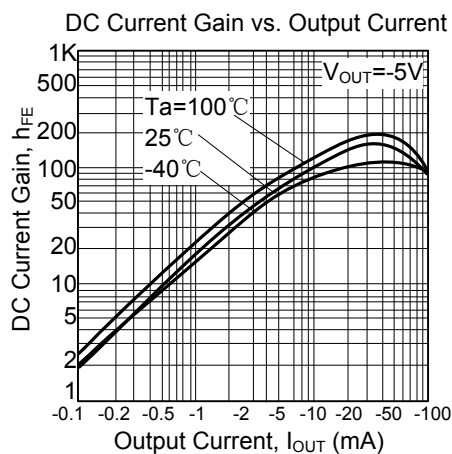
TR₁ (NPN)



TR₂ (PNP)



■ TYPICAL CHARACTERISTICS(Cont.)



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