



# UG5K

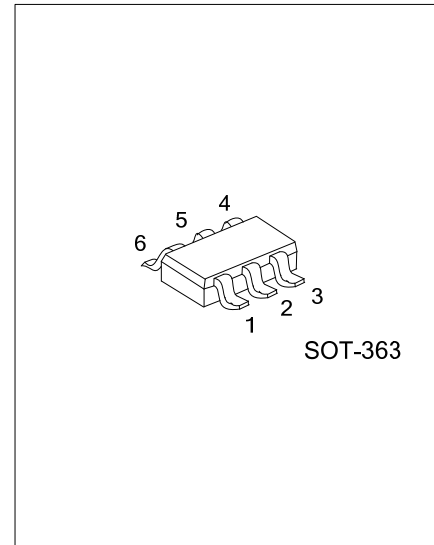
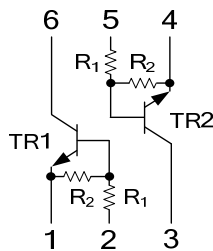
## DUAL TRANSISTOR

### GENERAL PURPOSE (DUAL DIGITAL TRANSISTORS)

#### FEATURES

\* Two DTC114Y chips in a SOT-363 package.

#### EQUIVALENT CIRCUIT



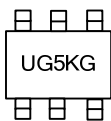
#### ORDERING INFORMATION

Ordering Number	Package	Pin Assignment						Packing
		1	2	3	4	5	6	
UG5KG-AL6-R	SOT-363	G1	I1	O2	G2	I2	O1	Tape Reel

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

<p>UG5KG-AL6-R</p>	<p>(1) R: Tape Reel</p> <p>(2) AL6: SOT-363</p> <p>(3) G: Halogen Free and Lead Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless others specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V_{CC}$	50	V
Input Voltage	$V_{IN}$	-6 ~ +40	V
Output Current	$I_{OUT}$	70	mA
	$I_{O(MAX.)}$	100	mA
Power Dissipation	$P_D$	150	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.

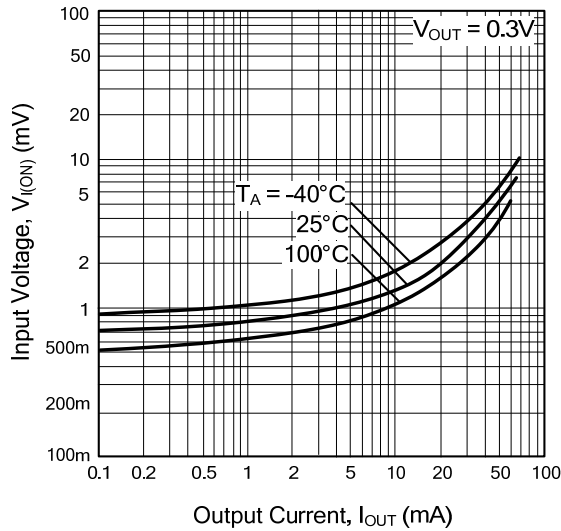
■ ELECTRICAL SPECIFICATIONS ( $T_A=25^\circ\text{C}$ , unless others specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(OFF)}$	$V_{CC}=5\text{V}$ , $I_{OUT}=100\mu\text{A}$			0.3	V
	$V_{IN(ON)}$	$V_{OUT}=0.3\text{V}$ , $I_{OUT}=1\text{mA}$	1.4			V
Output Voltage	$V_{OUT(ON)}$	$I_{OUT}/I_{IN}=5\text{mA}/0.25\text{mA}$		0.1	0.3	V
Input Current	$I_{IN}$	$V_{IN}=5\text{V}$			0.88	mA
Output Current	$I_{OUT(OFF)}$	$V_{CC}=50\text{V}$ , $V_{IN}=0\text{V}$			0.5	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{OUT}=5\text{V}$ , $I_{OUT}=5\text{mA}$	68			
Input Resistance	$R_1$		7	10	13	K $\Omega$
Resistor Ratio	$\frac{R_2}{R_1}$		3.7	4.7	5.7	
Transition Frequency	$f_T$	$V_{CE}=10\text{V}$ , $I_E=-5\text{mA}$ , $f=100\text{MHz}$		250		MHz

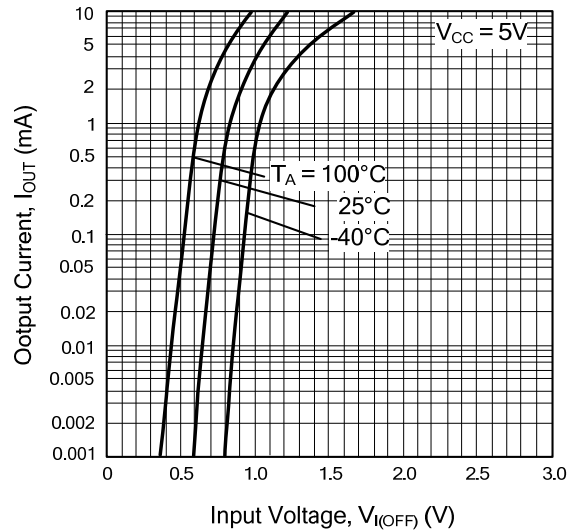
Note: Transition frequency of the device.

## TYPICAL CHARACTERISTICS

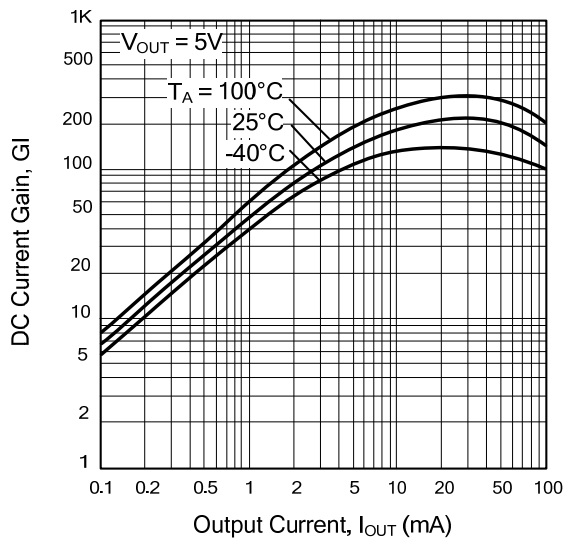
Input Voltage vs. Output Current  
(ON Characteristics)



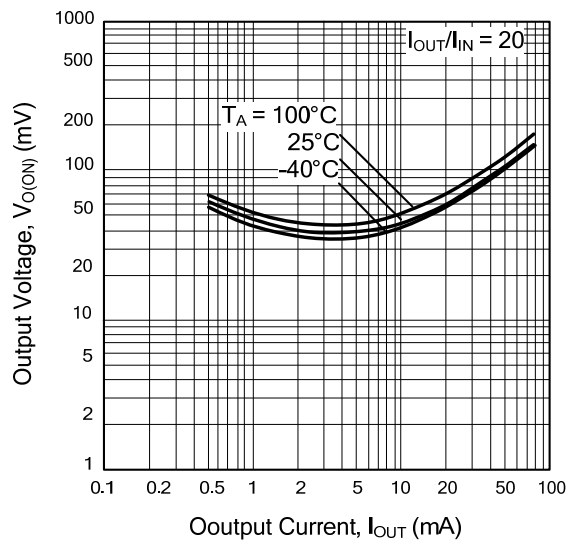
Output Current vs. Input Voltage  
(OFF Characteristics)



DC Current Gain vs. Output Current



Output Voltage vs. Output Current



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