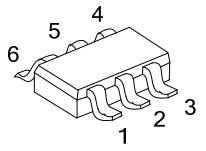
UG5K

DUAL TRANSISTOR

GENERAL PURPOSE
(DUAL DIGITAL RANSISTORS)

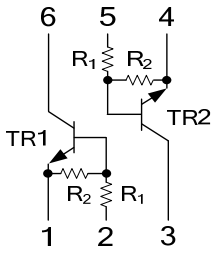


SOT-363

■ FEATURES

* Two DTC114Y chips in a SOT-363 package.

■ EQUIVALENT CIRCUIT



■ ORDERING INFORMATION

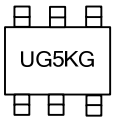
Ordering Number	Package	Pin Assignment						Packing
		1	2	3	4	5	6	
UG5KG-AL6-R	SOT-363	G1	I1	O2	G2	I2	O1	Tape Reel

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

UG5KG-AL6-R

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

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	°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.

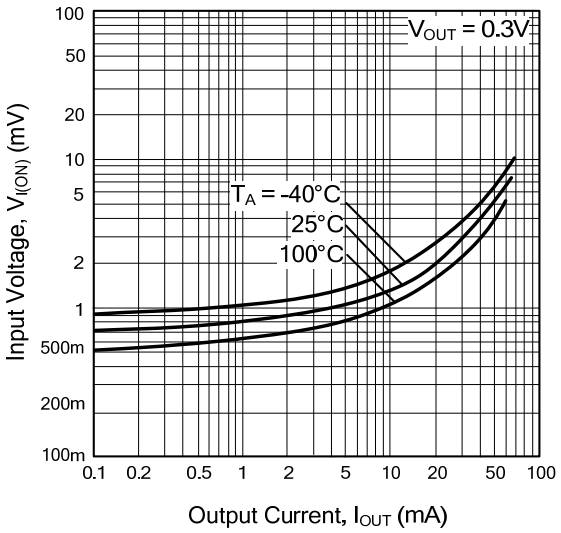
■ ELECTRICAL SPECIFICATIONS (T_A=25°C, unless others specified)

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
Resistor Ratio	$\frac{R_2}{R_1}$		3.7	4.7	5.7	
Transition Frequency	f_T	V_{CE} =10V, I_E =−5mA, f=100MHz		250		MHz

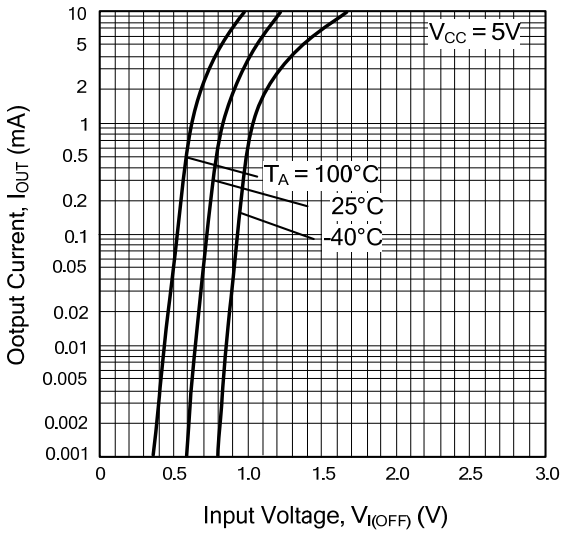
Note: Transition frequency of the device.

■ TYPICAL CHARACTERISTICS

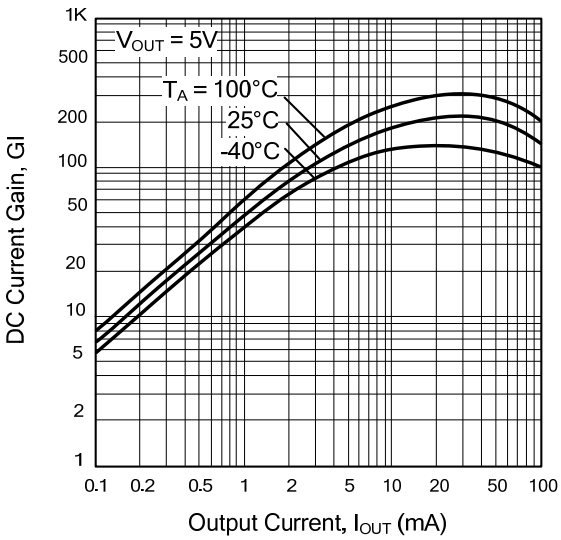
Input Voltage vs. Output Current
(ON Characteristics)



Output Current vs. Input Voltage
(OFF Characteristics)



DC Current Gain vs. Output Current



Output Voltage vs. Output Current