



## UG5J

## NPN SILICON TRANSISTOR

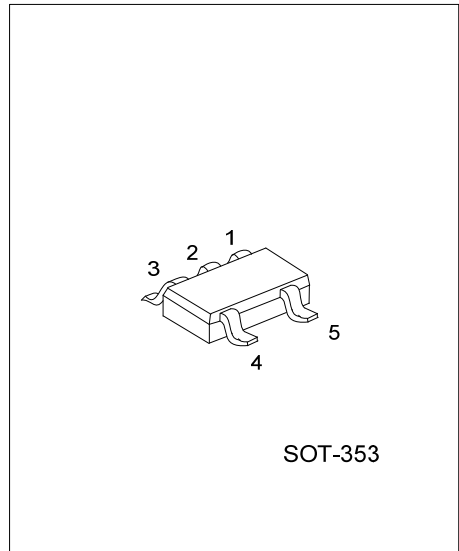
### NPN DIGITAL TRANSISTOR (BUILT- IN BIAS RESISTORS)

#### FEATURES

- \* Two DTC114Y chips in a SOT-353 package.
- \* Mounting cost and area can be reduced in half.

#### STRUCTURE

- \* Epitaxial planar type
- \* NPN silicon transistor  
(Built-in resistor type)
- \* Halogen Free

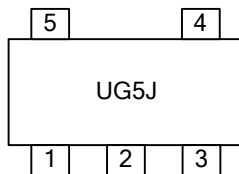


#### ORDERING INFORMATION

Ordering Number	Package	Pin Assignment					Packing
		1	2	3	4	5	
UG5JG-AL5-R	SOT-353	I1	G1,G2	I2	O2	O1	Tape Reel

<p>UG5JG-AL5-R</p> <p>(1) Packing Type (2) Package Type (3) Halogen Free</p>	<p>(1) R: Tape Reel (2) AL5: SOT-353 (4) G: Halogen Free</p>
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#### MARKING INFORMATION



■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sub>CC</sub>	50	V
Input Voltage	V <sub>IN</sub>	40	V
		-6	
Output Current	I <sub>OUT</sub>	70	mA
	I <sub>C(MAX)</sub>	100	
Total Power Dissipation	P <sub>D</sub>	150 (Note 2)	mW
Junction Temperature	T <sub>J</sub>	+150	°C
Storage Temperature	T <sub>STG</sub>	-50 ~ +150	°C

Notes : 1. 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.

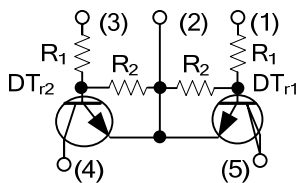
2. 120mW per element must not be exceeded.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V <sub>I(OFF)</sub>	V <sub>CC</sub> =5V, I <sub>O</sub> =100μA			0.3	V
	V <sub>I(ON)</sub>	V <sub>O</sub> =0.3V, I <sub>O</sub> =1mA	1.4			
Output Voltage	V <sub>O(ON)</sub>	I <sub>O</sub> =5mA, I <sub>I</sub> =0.25mA		0.1	0.3	V
Input Current	I <sub>I</sub>	V <sub>I</sub> =5V			0.88	mA
Output Current	I <sub>O(OFF)</sub>	V <sub>CC</sub> =50V, V <sub>I</sub> =0V			0.5	μA
DC Current Gain	G <sub>I</sub>	V <sub>O</sub> =5V, I <sub>O</sub> =5mA	68			
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>E</sub> =-5mA, f=100MHz (Note 1)		250		MHz
Input Resistance	R <sub>1</sub>		7	10	13	kΩ
Resistance Ratio	R <sub>2</sub> /R <sub>1</sub>		3.7	4.7	5.7	

Note: 1. Transition frequency of the device.

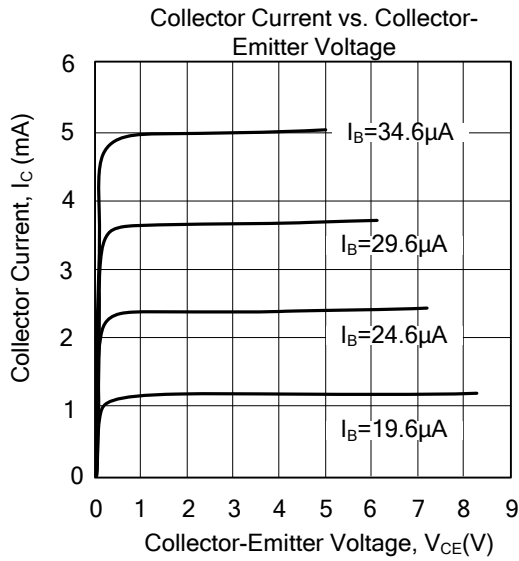
■ EQUIVALENT CIRCUIT (The following characteristic apply to both DT<sub>r1</sub> and DT<sub>r2</sub>)



$$R_1=10k\Omega$$

$$R_2=47k\Omega$$

■ TYPICAL CHARACTERISTICS



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