



## UG8J

### NPN EPITAXIAL SILICON TRANSISTOR

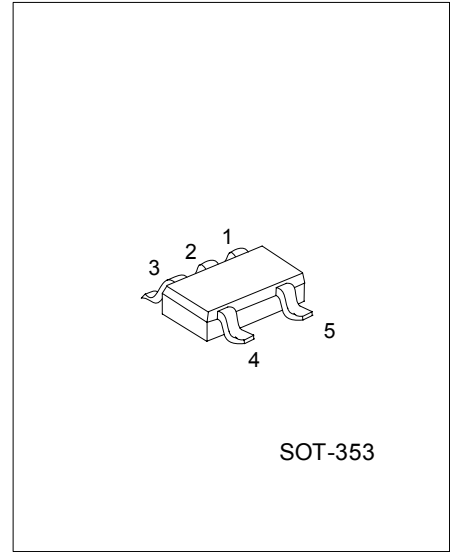
## EMITTER COMMON (DUAL DIGITAL TRANSISTORS)

### FEATURES

- \* Two DTC143Z chips in a SOT-353 package.
- \* Mounting cost and area can be cut in half.

### STRUCTURE

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



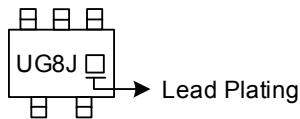
\*Pb-free plating product number: UG8JL

### ORDERING INFORMATION

Order Number		Package	Pin Assignment					Packing
Normal	Lead Free Plating		1	2	3	4	5	
UG8J-AL5-0-R	UG8J-AL5-0-R	SOT-353	B1	E1,E2	B2	C2	C1	Tape Reel

<p>UG8JL-AL5-0-R</p> <p>(1)Packing Type (2)Pin Assignment (3)Package Type (4)Lead Plating</p>	<p>(1) R: Tape Reel (2) refer to Pin Assignment (3) AL5: SOT-353 (4) L: Lead Free Plating, Blank: Pb/Sn</p>
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### MARKING INFORMATION



### ■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V_{CC}$	50	V
Input Voltage	$V_{IN}$	30	V
		-5	
Output Current	$I_{OUT}$	100	mA
	$I_{C(MAX)}$	100	
Total Power Dissipation	$P_D$	150 (Note1)	mW
Junction Temperature	$T_J$	+150	°C
Storage Temperature	$T_{STG}$	-40 ~ +150	°C

Note 1. \*120mW per element must not be exceeded.

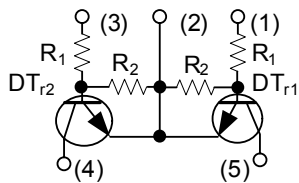
2. Absolute maximum ratings are those values beyond which the device could be permanently damaged.  
 Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ 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
	$V_{I(ON)}$	$V_{OUT}=0.3V, I_{OUT}=5mA$	1.3			
Output Voltage	$V_{O(ON)}$	$I_{OUT}=5mA, I_{IN}=0.25mA$		0.1	0.3	V
Input Current	$I_{IN}$	$V_{IN}=5V$			1.8	mA
Output Current	$I_{O(OFF)}$	$V_{CC}=50V, V_{IN}=0V$			0.5	$\mu A$
DC Current Gain	$G_I$	$V_{OUT}=5V, I_{OUT}=10mA$	80			
Transition Frequency	$f_T$	$V_{CE}=10V, I_E=-5mA, f=100MHz^*$		250		MHz
Input Resistance	$R_1$		3.29	4.7	6.11	K $\Omega$
Resistance Ratio	$R_2/R_1$		8	10	12	

Note \* Transition frequency of the device.

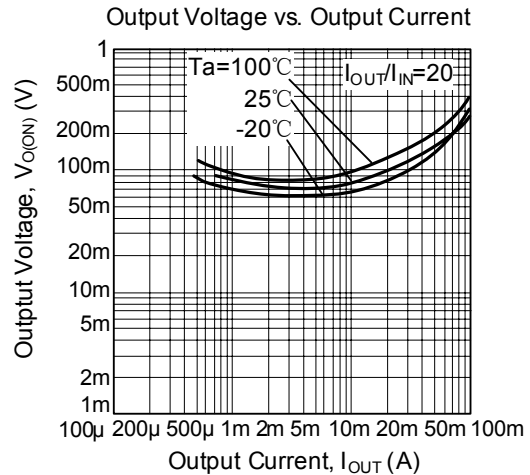
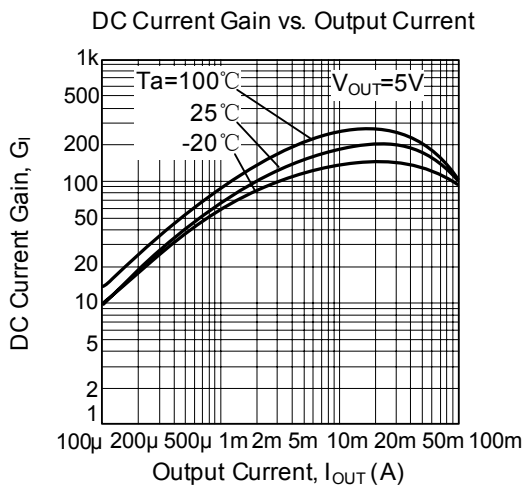
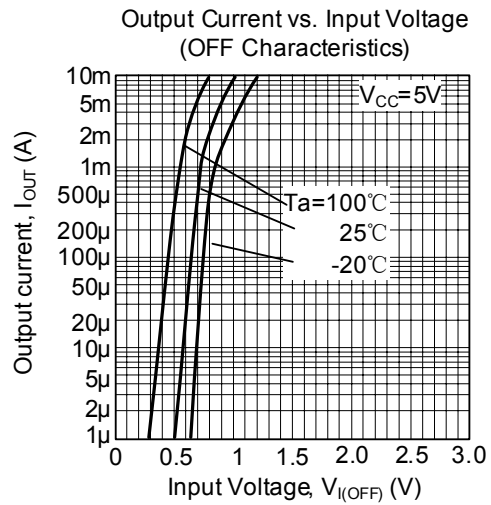
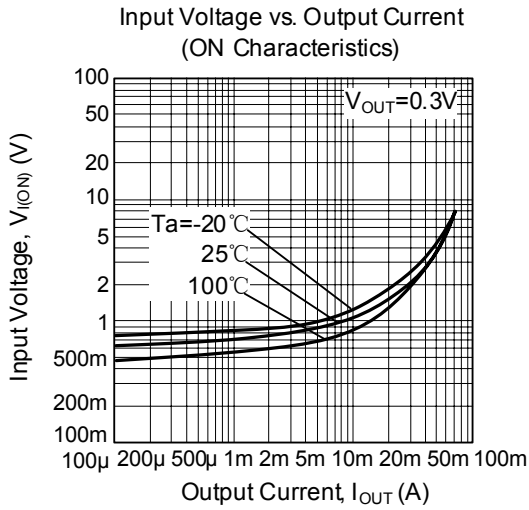
### ■ EQUIVALENT CIRCUIT (The following characteristic apply to both DT<sub>r1</sub> and DT<sub>r2</sub>)



$$R_1 = 4.7k \Omega$$

$$R_2 = 4.7k \Omega$$

■ TYPICAL CHARACTERISTICS



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