



UNISONIC TECHNOLOGIES CO., LTD

UG8J

NPN EPITAXIAL SILICON TRANSISTOR

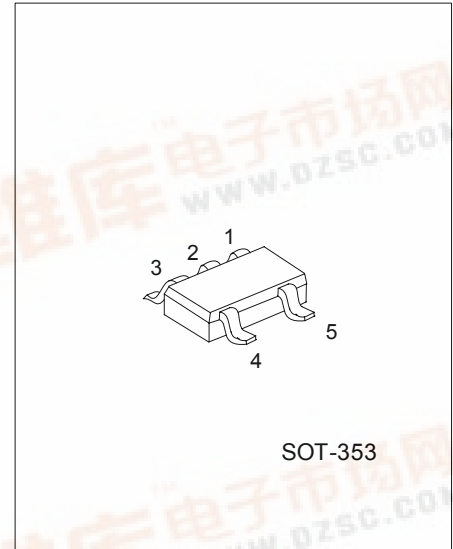
EMITTER COMMON (DUAL DIGITAL TRANSISTORS)

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)



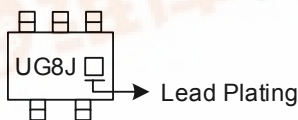
*Pb-free plating product number: UG8JL

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

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



■ ABSOLUTE MAXIMUM RATING (Ta=25℃)

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	℃
Storage Temperature	T_{STG}	-40 ~ +150	℃

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

2. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

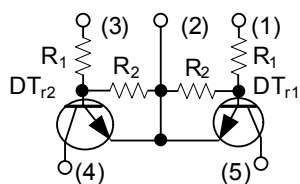
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25℃)

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	μA
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 Ω
Resistance Ratio	R_2/R_1		8	10	12	

Note * Transition frequency of the device.

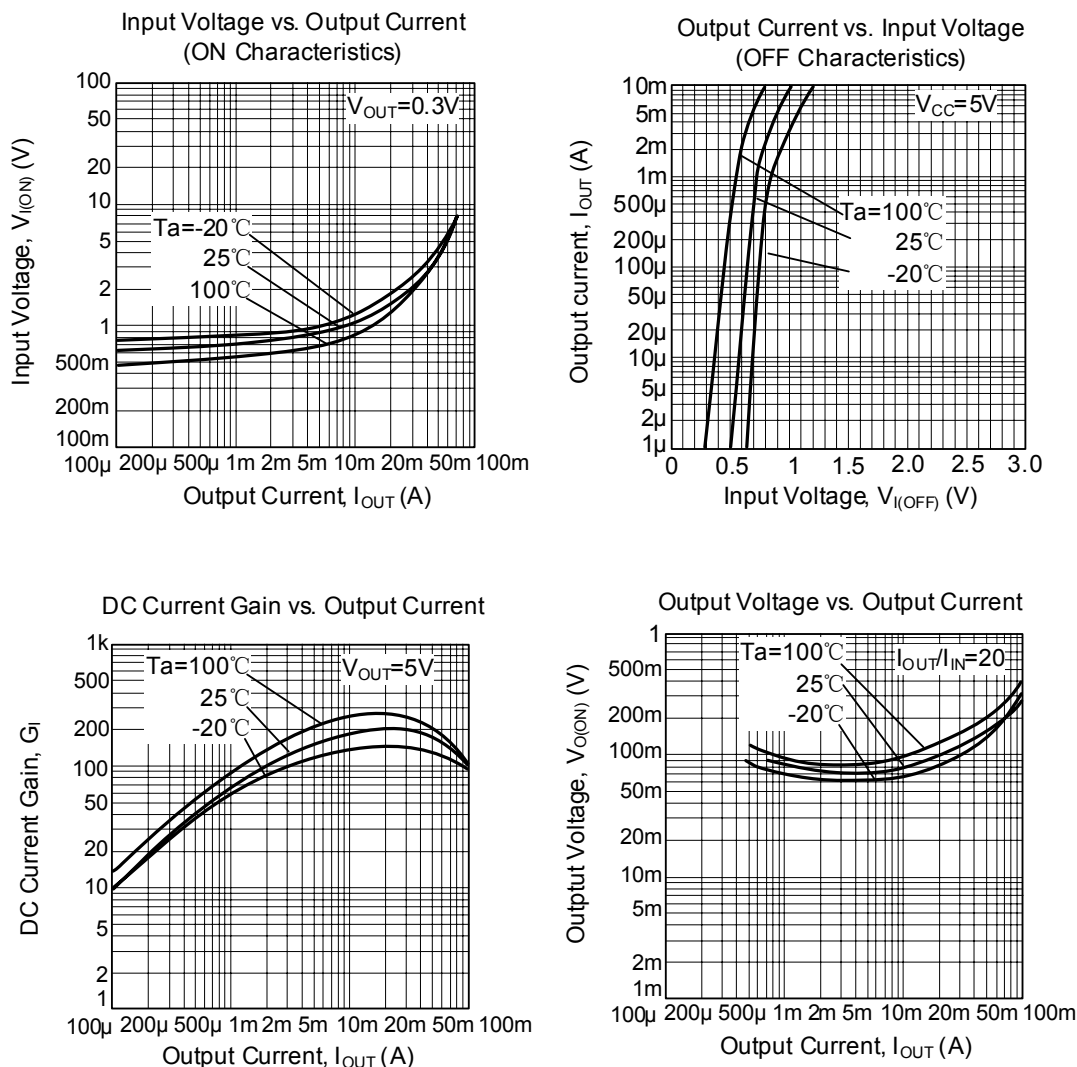
■ EQUIVALENT CIRCUIT (The following characteristic apply to both DT_{r1} and DT_{r2})



$$R_1=4.7k\ \Omega$$

$$R_2=4.7k\ \Omega$$

■ TYPICAL CHARACTERISTICS



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