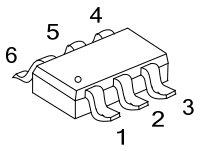
DTNN143Z

DUAL TRANSISTOR

COMPOUND TRANSISTORS



SOT-363

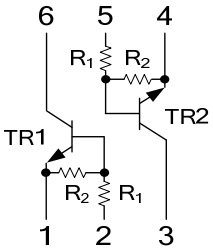
■ DESCRIPTION

The UTC **DTNN143Z** is an NPN epitaxial transistor; it uses UTC's advanced technology to provide the customers with low collector -emitter saturation voltage, etc.

■ FEATURES

* Two DTC143Z chips in a SOT-363 package
* Low collector-emitter saturation voltage
* With built-in bias resistors
* Simplify circuit design
* Silicon epitaxial type.
* The internal tow transistor elements are independent.

■ SYMBOL



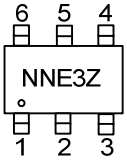
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
DTNN143ZL-AL6-R	DTNN143ZG-AL6-R	SOT-363	G1	I1	O2	G2	I2	O1	Tape Reel

Note: Pin Assignment: G: GND I: Input O: Output

DTNN143ZG-AL6-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AL6: SOT-363 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	-5 ~ +30	V
Output Current	I_{OUT}	100	mA
	$I_{C\ (MAX)}$	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.

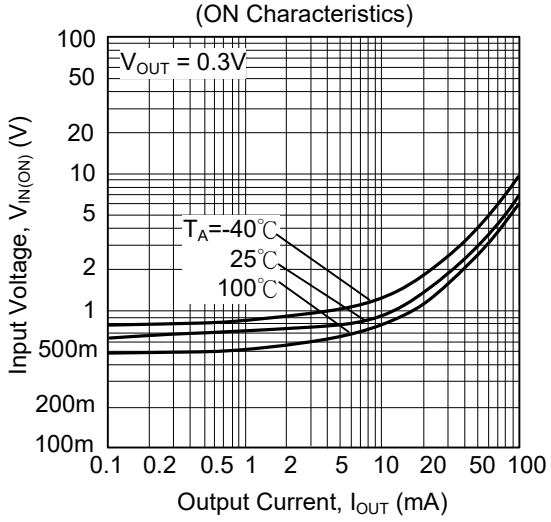
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN(OFF)}$	V_{CC}=5V, I_{OUT}=100μA			0.5	V
	$V_{IN(ON)}$	V_{OUT}=0.3V, I_{OUT}=5mA	1.3			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			1.8	mA
Output Current	$I_{O(OFF)}$	V_{CC}=50V, V_{IN}=0V			0.5	μA
DC Current Gain	h_{FE}	V_{OUT}=5V, I_{OUT}=10mA	80			
Input Resistance	R_1		3.29	4.7	6.11	KΩ
Resistance Ratio	R_2 / R_1		8	10	12	
Transition Frequency	f_T	V_{CE}=10V, I_E=-5mA, f=100MHz (Note)		250		MHz

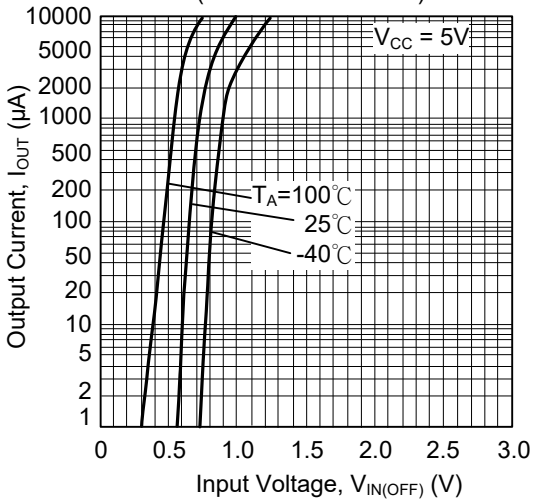
Note: Transition frequency of the device.

■ TYPICAL CHARACTERISTICS

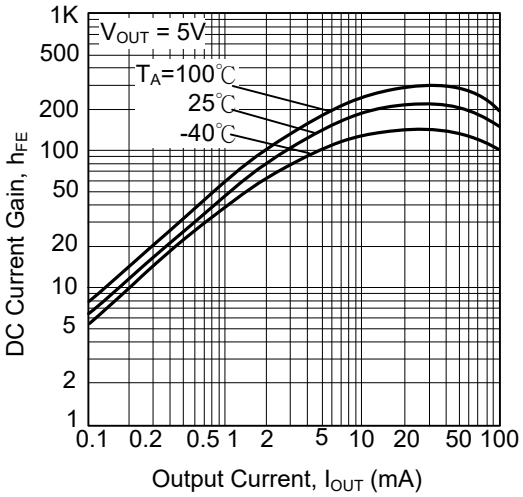
Input Voltage vs. Output Current
(ON Characteristics)



Output Current vs. Input Voltage
(OFF Characteristics)



DC Current Gain vs. Output Current



Output Voltage vs. Output Current