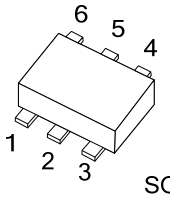
SILICON NPN EPITAXIAL TYPE (PCT PROCESS) SILICON PNP EPITAXIAL TYPE



SOT-563

■ DESCRIPTION

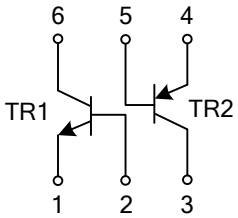
The UTC **NP1510** is a dual transistor, including a NPN transistor and a PNP transistor. It uses UTC's advanced technology to provide customers with high DC current gain, etc.

The UTC **NP1510** is suitable for audio frequency general purpose amplifier applications.

■ FEATURES

* High DC current gain

■ EQUIVALENT CIRCUITS



■ ORDERING INFORMATION

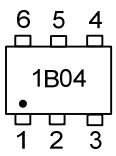
Ordering Number	Package	Pin Assignment						Packing
		1	2	3	4	5	6	
NP1510G-xx-AN6-R	SOT-563	E1	B1	C2	E2	B2	C1	Tape Reel

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

NP1510G-xx-AN6-R

(1)Packing Type	(1) R: Tape Reel
(2)Package Type	(2) AN6: SOT-563
(3)Rank	(3) xx: refer to Classification of h_{FE}
(4)Green Package	(4) G: Halogen Free and Lead Free

■ MARKING



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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage	TR1	V_{CBO}	60	V
	TR2		-50	V
Collector-Emitter Voltage	TR1	V_{CEO}	50	V
	TR2		-50	V
Emitter-Base Voltage	TR1	V_{EBO}	5	V
	TR2		-5	V
Collector Current	TR1	I_C	150	mA
	TR2		-150	mA
Base Current	TR1	I_B	30	mA
	TR2		-30	mA
Collector Power Dissipation (Note 2)		P_D	100	mW
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-40 ~ +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. Total rating.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
TR1 (NPN)						
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}= 5V, I_C=0			0.1	μA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=100mA, I_B=10mA		0.1	0.25	V
DC Current Transfer Ratio	$h_{FE\ (Note\ 1)}$	V_{CE}=6V, I_C=2mA	120		400	
Transition Frequency	f_T	V_{CE}=10V, I_C=1mA	80			MHz
Output Capacitance	Cob	V_{CB}=10V, I_E=0A, f=1MHz		2		pF
TR2 (PNP)						
Collector Cut-Off Current	I_{CBO}	V_{CB}=-50V, I_E=0			-0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-5V, I_C=0			-0.1	μA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-100mA, I_B=-10mA		-0.1	-0.3	V
DC Current Transfer Ratio	$h_{FE\ (Note\ 1)}$	V_{CE}=-6V, I_C=-2mA	120		400	
Transition Frequency	f_T	V_{CE}=-10V, I_C=-1mA	80			MHz
Output Capacitance	Cob	V_{CB}=-10V, I_E=0A, f=1MHz		4		pF

■ CLASSIFICATION OF h_{FE}

RANK	Y	GR
RANGE	120 ~ 240	200 ~ 400