



2N3773

POWER TRANSISTOR

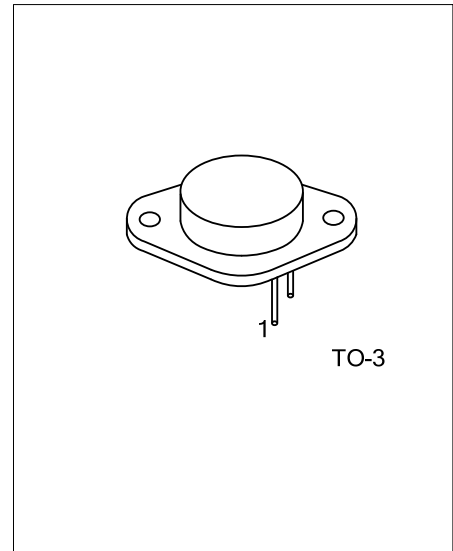
COMPLEMENTARY SILICON TRANSISTORS

DESCRIPTION

The UTC **2N3773** are complement silicon power transistors designed for high power audio, disk head positions and other linear applications. These device can be used in power switching circuits such as relay or solenoid drivers, DC to DC converters or inverts.

FEATURES

- * Complement Characterized for linear operation
- * High DC Current Gain and low saturation voltage
 $\eta_{FE} > 15(8A, 4V)$
 $V_{CE(SAT)} < 1.4V(I_C=8A, I_B=0.8A)$
- * For Low Distortion Complementary Designs



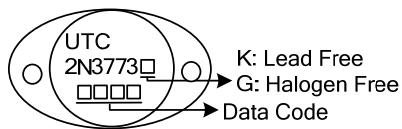
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N3773L-T30-Y	2N3773G-T30-Y	TO-3	B	E	C	Tray

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

<p>2N3773L-T30-Y</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) Y: Tray (2) T30: TO-3 (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATING ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector-Base Voltage	V_{CBO}	160	V	
Collector-Emitter Voltage	V_{CEO}	140	V	
Emitter-Base Voltage	V_{EBO}	7	V	
Collector-Emitter Voltage	V_{CEX}	160	V	
Power Dissipation	P_C	$T_C=25^{\circ}\text{C}$	150	W
		Dertate Above 25°C	0.855	W/ $^{\circ}\text{C}$
Collector Current	I_C	Continuous	16	A
		Peak	30	A
Base Current	I_B	Continuous	4	A
		Peak	15	A
Junction Temperature	T_J	150	$^{\circ}\text{C}$	
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$	

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. Pulse Test: $P_W \leq 5\text{ms}$, Duty Cycle $\leq 10\%$

■ THERMAL DATA

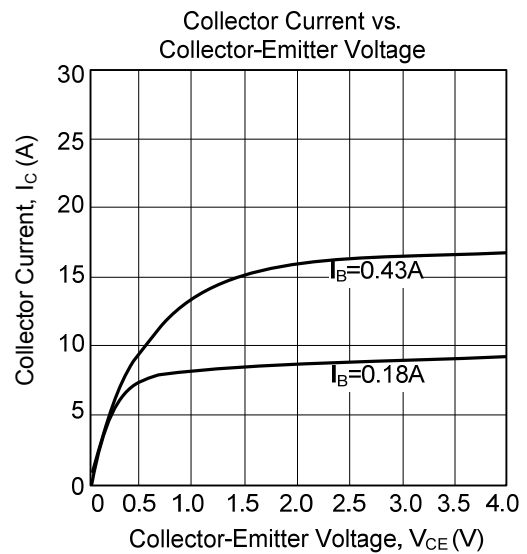
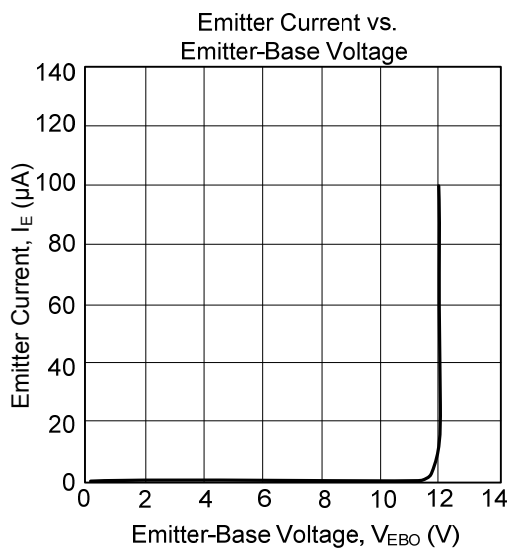
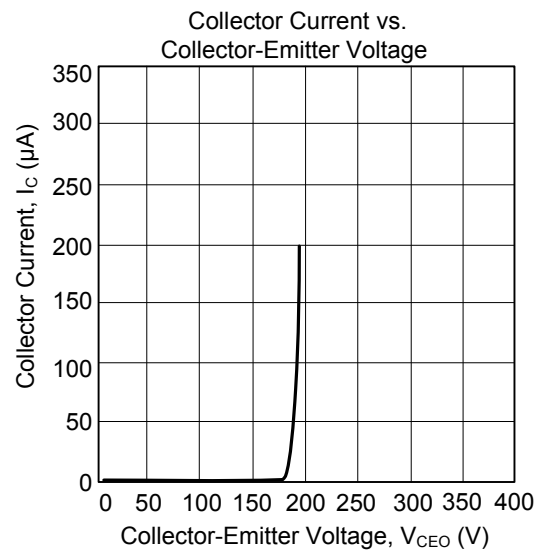
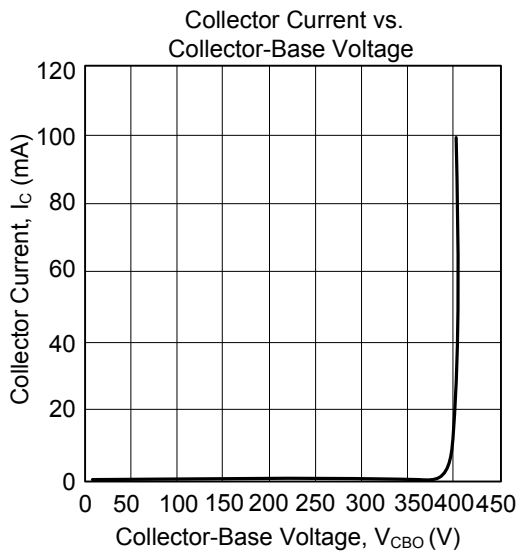
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	1.17	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=0.2\text{A}, I_B=0$	160			V
Collector-Emitter Sustaining Voltage	BV_{CEX}	$I_C=0.1\text{A}, V_{BE(OFF)}=1.5\text{V}, R_{BE}=100\Omega$	160			V
Collector-Emitter Sustaining Voltage	BV_{CER}	$I_C=0.1\text{A}, R_{BE}=100\Omega$	150			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=140\text{V}, I_E=0$			2	mA
Emitter Cut-off Current	I_{EBO}	$V_{BE}=7\text{V}, I_C=0$			5	mA
Collector Cut-off Current	I_{CEX}	$V_{CE}=140\text{V}, V_{BE(OFF)}=1.5\text{V}$		2		mA
		$V_{CE}=140\text{V}, V_{BE(OFF)}=1.5\text{V}, T_C=150^{\circ}\text{C}$		10		mA
ON CHARACTERISTICS						
DC Current Gain (Note)	h_{FE1}	$V_{CE}=4\text{V}, I_C=8\text{A}$	15		60	
	h_{FE2}	$V_{CE}=4\text{V}, I_C=16\text{A}$	5			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=8\text{A}, I_B=800\text{mA}$			1.4	V
		$I_C=16\text{A}, I_B=3.2\text{A}$			4	V
Base-Emitter Saturation Voltage	$V_{BE(ON)}$	$I_C=8\text{A}, V_{CE}=4\text{V}$			2.2	V
DYNAMIC CHARACTERISTICS						
Small Signal Current Gain	h_{FE}	$I_C=1\text{A}, V_{CE}=4\text{V}, f=1\text{kHz}$	40			
Magnitade Of Commom-Emitter Small Signal, Short Circuit Forward Current Transfer Ratio	$ h_{FE} $	$I_C=1\text{A}, f=50\text{kHz}$	4			
Second Breakdown Collector With Base Forward Biased	I_S/b	$t=1\text{s}(\text{non-repetive}), V_{CE}=100\text{V}$	1.5			A

Note: Pulse Test: $P_W \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

■ TYPICAL CHARACTERISTICS



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