



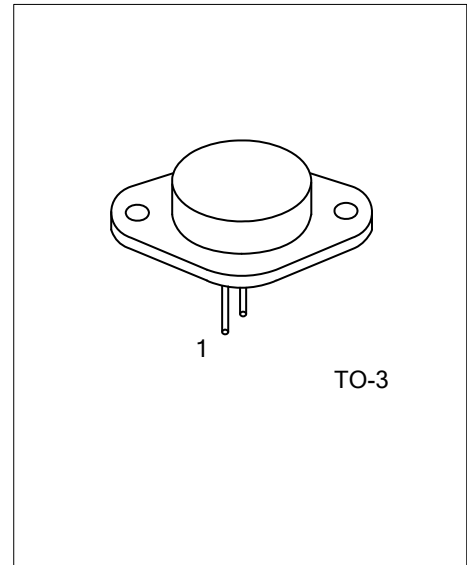
2N3772

SILICON NPN TRANSISTOR

SILICON NPN TRANSISTORS

■ DESCRIPTION

The UTC **2N3772** is a silicon power transistor in TO-3 metal case. It is designed for linear amplifiers, series pass regulators, and inductive switching applications.



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N3772L-T30-Y	2N3772G-T30-Y	TO-3	B	E	C	Tray

2N2955L-T30-Y (1) Packing Type (2) Package Type (3) Lead Free	(1) Y: Tray (2) T30: TO-3 (3) G: Halogen Free, L: Lead Free
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■ **ABSOLUTE MAXIMUM RATING** ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector-Emitter Voltage	V_{CEV}	80	V
Collector Current	I_C	30	A
Collector Peak Current (Note 1)	I_{CM}	30	A
Base Current	I_B	5	A
Base Peak Current (Note 1)	I_{BM}	15	A
Power Dissipation ($T_A=25^\circ\text{C}$)	P_D	150	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note 1. Pulse Test: $P_W \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Sustaining Voltage	$V_{CEX(SUS)}$	$I_C=0.2\text{A}, V_{BE(OFF)}=1.5\text{V}, R_{BE}=100\Omega$	80			V
Collector-Emitter Sustaining Voltage	$V_{CER(SUS)}$	$I_C=0.2\text{A}, R_{BE}=100\Omega$	70			V
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C=0.2\text{A}, I_B=0$	60			V
Collector Cut-off Current	I_{CEO}	$V_{CE}=50\text{V}, I_B=0$			10	mA
Collector Cut-off Current	I_{CEX}	$V_{CE}=100\text{V}, V_{BE(OFF)}=1.5\text{V}$			5	mA
		$V_{CE}=30\text{V}, V_{BE(OFF)}=1.5\text{V}, T_A=150^\circ\text{C}$			10	
Collector Cut-off Current	I_{CBO}	$V_{CE}=50\text{V}, I_E=0$			5	mA
Emitter Cut-off Current	I_{EBO}	$V_{BE}=7\text{V}, I_C=0$			5	mA
ON CHARACTERISTICS						
DC Current Gain (Note)	h_{FE}	$I_C=10\text{A}, V_{CE}=4\text{V}$	15		60	
		$I_C=20\text{A}, V_{CE}=4\text{V}$	5			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10\text{A}, I_B=1.5\text{A}$			1.4	V
		$I_C=20\text{A}, I_B=4\text{A}$			4.0	
Base-Emitter On Voltage	$V_{BE(ON)}$	$I_C=10\text{A}, V_{CE}=4\text{V}$			2.2	V
SECOND BREAKDOWN						
Second Breakdown Collector with Base Forward Biased	I_S/b	$V_{CE}=60\text{V}, T=1.0\text{s}, \text{Non-repetitive}$	2.5			A
DYNAMIC CHARACTERISTICS						
Current Gain-Bandwidth Product	f_T	$I_C=1\text{A}, V_{CE}=4\text{V}, f=50\text{kHz}$	0.2			MHz
Small-Signal Current Gain	h_{FE}	$I_C=1\text{A}, V_{CE}=4\text{V}, f=1\text{kHz}$	40			

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

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