



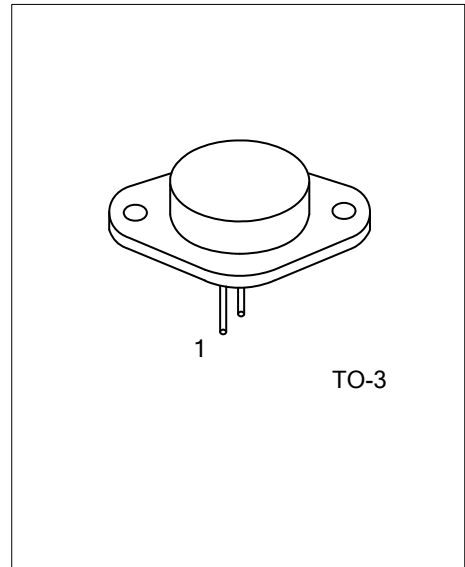
# 2N3772

## 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

<p>2N2955L-T30-Y</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Free</p>	<p>(1) Y: Tray</p> <p>(2) T30: TO-3</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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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
<b>OFF CHARACTERISTICS</b>						
Collector-Emitter Sustaining Voltage	$V_{CEX(SUS)}$	$I_C=0.2A, V_{BE(OFF)}=1.5V, R_{BE}=100\Omega$	80			V
Collector-Emitter Sustaining Voltage	$V_{CER(SUS)}$	$I_C=0.2A, R_{BE}=100\Omega$	70			V
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C=0.2A, I_B=0$	60			V
Collector Cut-off Current	$I_{CEO}$	$V_{CE}=50V, I_B=0$			10	mA
Collector Cut-off Current	$I_{CEX}$	$V_{CE}=100V, V_{BE(OFF)}=1.5V$ $V_{CE}=30V, V_{BE(OFF)}=1.5V, T_A=150^\circ\text{C}$			5 10	mA
Collector Cut-off Current	$I_{CBO}$	$V_{CE}=50V, I_E=0$			5	mA
Emitter Cut-off Current	$I_{EBO}$	$V_{BE}=7V, I_C=0$			5	mA
<b>ON CHARACTERISTICS</b>						
DC Current Gain (Note)	$h_{FE}$	$I_C=10A, V_{CE}=4V$ $I_C=20A, V_{CE}=4V$	15 5		60	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10A, I_B=1.5A$ $I_C=20A, I_B=4A$			1.4 4.0	V
Base-Emitter On Voltage	$V_{BE(ON)}$	$I_C=10A, V_{CE}=4V$			2.2	V
<b>SECOND BREAKDOWN</b>						
Second Breakdown Collector with Base Forward Biased	$I_{S/b}$	$V_{CE}=60V, T=1.0s, \text{Non-repetitive}$	2.5			A
<b>DYNAMIC CHARACTERISTICS</b>						
Current Gain-Bandwidth Product	$f_T$	$I_C=1A, V_{CE}=4V, f=50\text{kHz}$	0.2			MHz
Small-Signal Current Gain	$h_{FE}$	$I_C=1A, V_{CE}=4V, f=1\text{kHz}$	40			

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

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