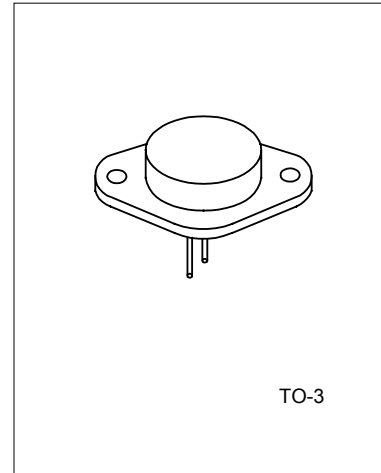


## SILICON NPN TRANSISTORS

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

ABSOLUTE MAXIMUM RATINGS (  $T_a=25^{\circ}\text{C}$  , unless otherwise specified )

PARAMETERS	SYMBOL	VALUE	UNITS
Collector-Base Voltage	$V_{CB0}$	100	V
Collector-Emitter Voltage	$V_{CE0}$	60	V
Emitter-Base Voltage	$V_{EB0}$	7	V
Collector-Emitter Voltage	$V_{CEV}$	80	V
Collector Current	$I_c$	30	A
Collector Peak Current(1)	$I_{CM}$	30	A
Base Current	$I_B$	5	A
Base Peak Current(1)	$I_{BM}$	15	A
Total Dissipation at $T_a=25^{\circ}\text{C}$	$P_{tot}$	150	W
Storage Temperature	$T_{STG}$	-65 ~ +200	$^{\circ}\text{C}$
Max. Operating Junction Temperature	$T_J$	200	$^{\circ}\text{C}$

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	$V_{CEX(sus)}$	$I_c=0.2\text{ A}$ , $V_{BE(OFF)}=1.5\text{V}$ , $R_{BE}=100\text{ Ohms}$	80			V
Collector-Emitter Sustaining Voltage	$V_{CER(sus)}$	$I_c=0.2\text{ A}$ , $R_{BE}=100\text{ Ohms}$	70			V
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_c=0.2\text{ A}$ , $I_B=0$	40			V
Collector Cut-off Current	$I_{CEO}$	$V_{CE}=50\text{V}$ , $I_B=0$			10	mA
Collector Cut-off Current	$I_{CEX}$	$V_{CE}=100\text{V}$ , $V_{BE(off)}=1.5\text{V}$ . $V_{CE}=30\text{V}$ , $V_{BE(off)}=1.5\text{V}$ , $T_a=150^{\circ}\text{C}$			5 10	mA
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)	$h_{FE}$	$I_c=10\text{A}$ , $V_{CE}=4\text{V}$ , $I_c=20\text{A}$ , $V_{CE}=4\text{V}$	15 5		60	

# UTC2N3772

# SILICON NPN TRANSISTOR

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Saturation Voltage	VCE(sat)	Ic=10A, Ib=1.5A Ic=20A, Ib=4A			1.4 4.0	V
Base-Emitter On Voltage	VBE(on)	Ic=10A, VCE=4V			2.2	V
<b>SECOND BREAKDOWN</b>						
Second Breakdown Collector with Base Forward Biased	Is/b	VCE=60V, T=1.0s, Non-repetitive	2.5			A
<b>DYNAMIC CHARACTERISTICS</b>						
Current Gain-Bandwidth Product	fT	Ic=1A, VCE=4V, f=50kHz	0.2			MHz
Small-Signal Current Gain	hFE	Ic=1A, VCE=4V, f=1kHz	40			

Note(1): Pulse Test: Puls Width ≤ 300μs, Duty Cycle ≤ 2%

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