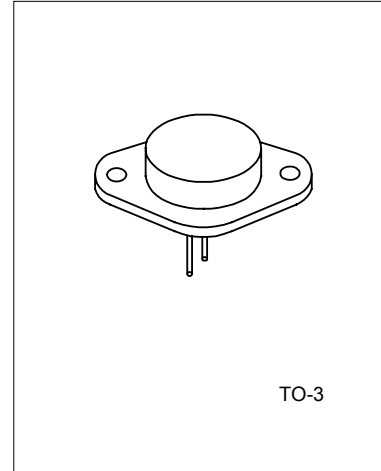


SILICON NPN TRANSISTORS

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 (Ta=25°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 Ta=25°C	P _{tot}	150	W
Storage Temperature	T _{STG}	-65 ~ +200	°C
Max. Operating Junction Temperature	T _J	200	°C

ELECTRICAL CHARACTERISTICS(Ta=25°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 A, V _{BE(OFF)} =1.5V, R _{BE} =100 Ohms	80			V
Collector-Emitter Sustaining Voltage	V _{CER(sus)}	I _c =0.2 A, R _{BE} =100 Ohms	70			V
Collector-Emitter Sustaining Voltage	V _{CEO(sus)}	I _c =0.2 A, I _B =0	40			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, Ta=150°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
ON CHARACTERISTICS						
DC Current Gain(note)	h _{FE}	I _c =10A, V _{CE} =4V, I _c =20A, V _{CE} =4V	15 5		60	

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SILICON NPN TRANSISTOR

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
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
SECOND BREAKDOWN						
Second Breakdown Collector with Base Forward Biased	I _{S/b}	V _{CE} =60V, T=1.0s, Non-repetitive	2.5			A
DYNAMIC CHARACTERISTICS						
Current Gain-Bandwidth Product	f _T	I _C =1A, V _{CE} =4V, f=50kHz	0.2			MHz
Small-Signal Current Gain	h _{FE}	I _C =1A, V _{CE} =4V, f=1kHz	40			

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