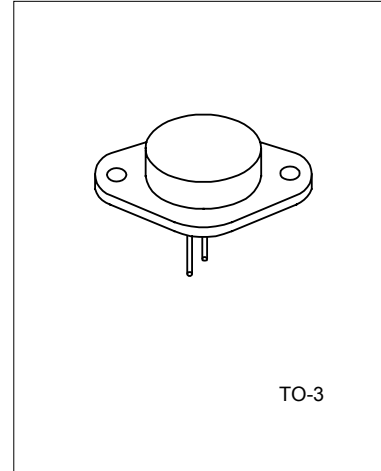


SILICON NPN TRANSISTORS

The UTC 2N3055 is a silicon NPN transistor in TO-3 metal case. It is intended for power switching circuits, series and shunt regulators, output stages and high fidelity amplifiers.

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}	70	V
Collector Current	I_c	15	A
Collector Peak Current(1)	I_{CM}	15	A
Base Current	I_B	7	A
Base Peak Current(1)	I_{BM}	15	A
Total Dissipation at $T_a=25^{\circ}\text{C}$	P_{tot}	115	W
Storage Temperature	T_{STG}	-65 to 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	$V_{CE0(sus)}$	$I_c=200\text{mA}$, $I_B=0\text{V}$	60			V
Collector-Emitter Sustaining Voltage	$V_{CEV(sus)}$	$I_c=0.2\text{A}$, $R_{BE}=100\text{ Ohms}$	70			V
Collector Cut-off Current	I_{CEO}	$V_{CE}=30\text{V}$, $I_B=0$			0.7	mA
Collector Cut-off Current	I_{CEX}	$V_{CE}=100\text{V}$, $V_{BE}(\text{off})=1.5\text{V}$. $V_{CE}=100\text{V}$, $V_{BE}(\text{off})=1.5\text{V}$, $T_a=150^{\circ}\text{C}$			1.0 5.0	mA
Emitter Cut-off Current	I_{EBO}	$V_{BE}=7\text{V}$, $I_c=0$			5.0	mA
ON CHARACTERISTICS						
DC Current Gain(note)	h_{FE}	$I_c=4\text{A}$, $V_{CE}=4\text{V}$, $I_c=10\text{A}$, $V_{CE}=4\text{V}$	20 5		70	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c=4\text{A}$, $I_B=400\text{mA}$ $I_c=10\text{A}$, $I_B=3.3\text{A}$			1.1 3.0	V

UTC2N3055

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Base-Emitter On Voltage	$V_{BE(on)}$	$I_c=4A, V_{CE}=4V$			1.5	V
SECOND BREAKDOWN						
Second Breakdown Collector with Base Forward Biased	$I_{S/b}$	$V_{CE}=60V, T=1.0s$, Non-repetitive	2.87			A
DYNAMIC CHARACTERISTICS						
Current Gain-Bandwidth Product	f_T	$I_c=0.5A, V_{CE}=10V, f=1MHz$	2.5			MHz
Small-Signal Current Gain	h_{FE}	$I_c=1A, V_{CE}=4V, f=1kHz$	15		120	
Small-Signal Current Gain Cut-off Frequency	f_{HFE}	$I_c=1A, V_{CE}=4V$ $F=1.0kHz$	10			kHz

Note(1):Pulse Test: Puls Width $\leq$ 300 μ s, Duty Cycle $\leq$ 2%