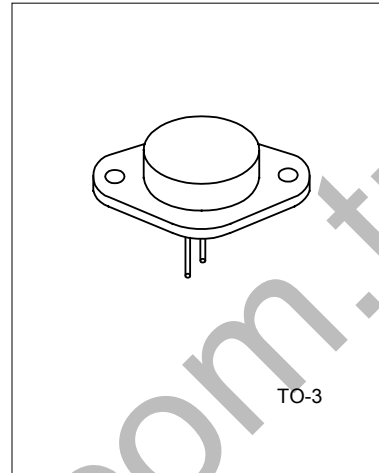


SILICON NPN TRANSISTORS

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	$V_{CER(sus)}$	$I_C=0.2\text{A}, R_{BE}=100\text{ Ohms}$	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}	$V_{CE}=100\text{V}, V_{BE(off)}=1.5\text{V}.$ $V_{CE}=100\text{V}, V_{BE(off)}=1.5\text{V},$ $T_a=150^{\circ}\text{C}$			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 ≤ 300μs, Duty Cycle ≤ 2%

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