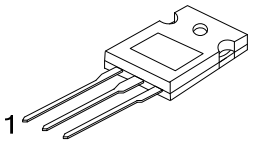
2N3055

NPN SILICON TRANSISTOR

SILICON NPN TRANSISTORS



TO-247

■ DESCRIPTION

The UTC **2N3055** is a silicon NPN transistor in TO-247 metal case. It is intended for power switching circuits, series and shunt regulators, output stages and high fidelity amplifiers.

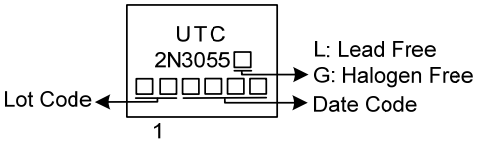
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N3055L-T47-T	2N3055G-T47-T	TO-247	B	C	E	Tube

Note: Pin Assignment: B: Base E: Emitter C: Case

2N3055G-T47-T (1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube (2) T47: TO-247 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C ,unless otherwise specified)

PARAMETERS	SYMBOL	VALUE	UNITS
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}	70	V
Collector Current	I_C	15	A
Collector Peak Current (Note)	I_{CM}	15	A
Base Current	I_B	7	A
Base Peak Current (Note)	I_{BM}	15	A
Total Dissipation at T_A=25°C	P_D	90	W
Max. Operating Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 ~ 200	°C

Note: 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°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C=200mA, I_B=0V	60			V
Collector-Emitter Sustaining Voltage	$V_{CER(sus)}$	I_C=0.2 A, R_{BE}=100 Ohms	70			V
Collector Cut-off Current	I_{CEO}	V_{CE}=30V, I_B=0			0.7	mA
Collector Cut-off Current (T_A=150°C)	I_{CEX}	V_{CE}=100V, $V_{BE(off)}$=1.5V			1.0	mA
		V_{CE}=100V, $V_{BE(off)}$=1.5V			5.0	mA
Emitter Cut-off Current	I_{EBO}	V_{BE}=7V, I_C=0			5.0	mA
ON CHARACTERISTICS						
DC Current Gain(note)	h_{FE}	I_C=4A, V_{CE}=4V	20		70	
		I_C=10A, V_{CE}=4V	5			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=4A, I_B=400mA			1.1	V
		I_C=10A, I_B=3.3A			3.0	V
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	Is/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: Pulse Test: Puls Width ≤ 300μs, Duty Cycle ≤ 2%