



2N3055

POWER LINEAR AND SWITCHING APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
V_{CBO}	Collector to Base Voltage	100	V
V_{CEO}	#Collector-Emitter Voltage	60	V
V_{CER}	Collector-Emitter Voltage	70	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current – Continuous	15	Adc
I_B	Base Current – Continuous	7	Adc
P_D	Total Device Dissipation	@ $T_C = 25^\circ$ Derate above 25°	115 0.657 Watts W/°C
T_J	Junction Temperature	200	°C
T_S	Storage Temperature	-65 to +200	°C

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	1.52	°C/W

2N3055

ELECTRICAL CHARACTERISTICS

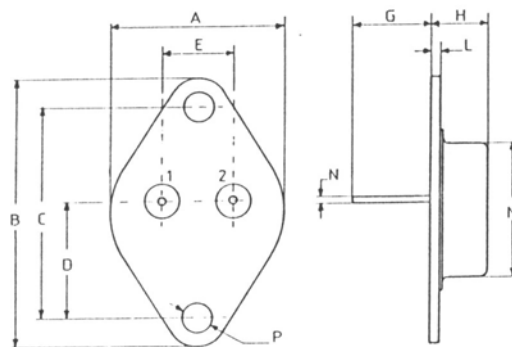
TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (1)	$I_C=200 \text{ mA dc}, I_B=0$	60	-	-	Vdc
BV_{CER}	Collector-Emitter Breakdown Voltage (1)	$I_C=200 \text{ mA dc}, R_{BE}=100\Omega$	70	-	-	Vdc
I_{CEO}	Collector-Emitter Current	$V_{CE}=30 \text{ Vdc}, I_B=0$	-	-	0.7	mA dc
I_{CEX}	Collector Cutoff Current	$V_{CE}=100 \text{ Vdc}, V_{EB(off)}=1.5 \text{ Vdc}$	-	-	5.0	mA dc
		$V_{CE}=100 \text{ Vdc}, V_{EB(off)}=1.5 \text{ Vdc}, T_C=150^\circ\text{C}$	-	-	30	
I_{EBO}	Emitter Cutoff Current	$V_{BE}=7.0 \text{ Vdc}, I_C=0$	-	-	5.0	mA dc
h_{FE}	DC Current Gain	$I_C=4.0 \text{ Adc}, V_{CE}=4.0 \text{ Vdc}$	20	-	70	
		$I_C=10 \text{ Adc}, V_{CE}=4.0 \text{ Vdc}$	5.0	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C=4.0 \text{ Adc}, I_B=0.4 \text{ Adc}$	-	-	1.1	Vdc
		$I_C=10 \text{ Adc}, I_B=3.3 \text{ Adc}$	-	-	8.0	
V_{BE}	Base-Emitter Voltage	$I_C=4.0 \text{ Adc}, V_{CE}=4.0 \text{ Vdc}$	-	1.8	-	Vdc
h_{fe}	Small Signal Current Gain	$V_{CE}=4.0 \text{ Vdc}, I_C=1.0 \text{ Adc}, f=1.0 \text{ kHz}$	15	-	120	-
$f_{\alpha e}$	Small Signal Current Gain Cutoff Frequency	$V_{CE}=4.0 \text{ Vdc}, I_C=1.0 \text{ Adc}, f=1.0 \text{ kHz}$	10	-	-	kHz
$I_{s/b}$	Second Breakdown Collector Current	$t=1 \text{ S (non repetitive)}, V_{CE}=60 \text{ Vdc}$	1.95	-	-	A

In accordance with JEDEC Registration Data
 (1) Pulse Width $\approx 300 \mu\text{s}$, Duty Cycle $< 2.0\%$

MECHANICAL CHARACTERISTICS CASE-TO-3

DIMENSIONS		
	mm	inches
A	25,51	1,004
B	38,93	1,53
C	30,12	1,18
D	17,25	0,68
E	10,89	0,43
G	11,62	0,46
H	8,54	0,34
L	1,55	0,6
M	19,47	0,77
N	1	0,04
P	4,06	0,16



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector

*Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.
 Data are subject to change without notice.*