

2N3054
2N3054A

**NPN SILICON
POWER TRANSISTOR**



TO-66 CASE

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N3054, 2N3054A types are NPN silicon power transistors manufactured by the epitaxial base process, mounted in a hermetically sealed metal case, designed for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Collector-Emitter Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Continuous Base Current
Power Dissipation (2N3054)
Power Dissipation (2N3054A)
Operating and Storage Junction Temperature
Thermal Resistance (2N3054)
Thermal Resistance (2N3054A)

SYMBOL		UNITS
V_{CBO}	90	V
V_{CEV}	90	V
V_{CER}	60	V
V_{CEO}	55	V
V_{EBO}	7.0	V
I_C	4.0	A
I_B	2.0	A
P_D	25	W
P_D	75	W
T_J, T_{stg}	-65 to +200	$^\circ\text{C}$
θ_{JC}	7.0	$^\circ\text{C/W}$
θ_{JC}	2.33	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CEV}	$V_{CE}=90\text{V}, V_{EB}=1.5\text{V}$		1.0	mA
I_{CEV}	$V_{CE}=90\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$		6.0	mA
I_{CEO}	$V_{CE}=30\text{V}$		500	μA
I_{EBO}	$V_{EB}=7.0\text{V}$		1.0	mA
BV_{CEO}	$I_C=100\text{mA}$	55		V
BV_{CER}	$I_C=100\text{mA}, R_{BE}=100\Omega$	60		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.0	V
$V_{CE(SAT)}$	$I_C=3.0\text{A}, I_B=1.0\text{A}$		6.0	V
$V_{BE(ON)}$	$V_{CE}=4.0\text{V}, I_C=500\text{mA}$		1.7	V
h_{FE}	$V_{CE}=4.0\text{V}, I_C=0.5\text{A}$	25	150	
h_{FE}	$V_{CE}=4.0\text{V}, I_C=3.0\text{A}$	5.0		
h_{fe}	$V_{CE}=4.0\text{V}, I_C=100\text{mA}, f=1.0\text{kHz}$	25	180	
f_T	$V_{CE}=10\text{V}, I_C=200\text{mA}, f=1.0\text{MHz}$	3.0		MHz
f_{hfe}	$V_{CE}=4.0\text{V}, I_C=100\text{mA}$	30		kHz

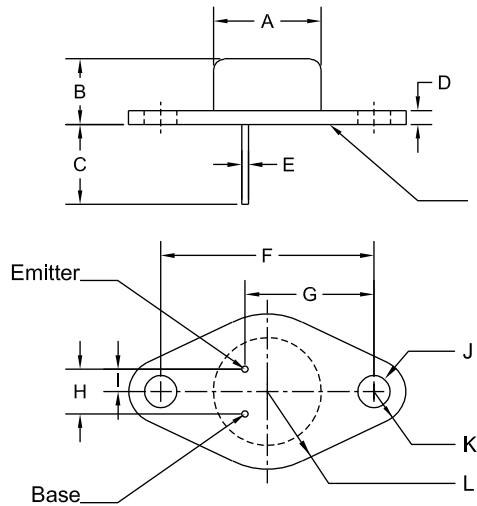
R1 (11-June 2012)

2N3054
2N3054A

NPN SILICON
POWER TRANSISTOR



TO-66 CASE - MECHANICAL OUTLINE



Seating Plane:
The seating plane must be within 0.001" concave to 0.004" convex within 0.600" diameter from the center of the device.

R2

MARKING:
FULL PART NUMBER

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.470	0.500	11.94	12.70
B	0.250	0.340	6.35	8.64
C	0.360	-	9.14	-
D	0.050	0.075	1.27	1.91
E (DIA)	0.028	0.034	0.71	0.86
F	0.958	0.962	24.33	24.43
G	0.570	0.590	14.48	14.99
H	0.190	0.210	4.83	5.33
I	0.093	0.107	2.36	2.72
J (DIA)	0.142	0.152	3.61	3.86
K (RAD)	0.145		3.68	
L (RAD)	0.350		8.89	

TO-66 (REV:R2)

R1 (11-June 2012)