

2N3054  
2N3054A

NPN SILICON  
POWER TRANSISTOR



TO-66 CASE

**Central**  
Semiconductor Corp.

www.centrialsemi.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	$^\circ\text{C}$
$\theta_{JC}$	7.0	$^\circ\text{C/W}$
$\theta_{JC}$	2.33	$^\circ\text{C/W}$

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

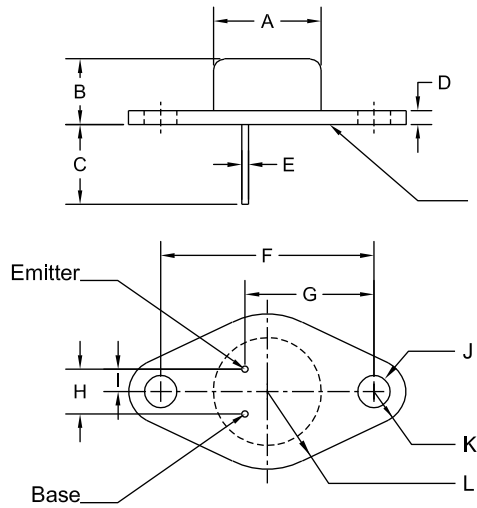
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CEV}$	$V_{CE}=90\text{V}, V_{EB}=1.5\text{V}$		1.0	mA
$I_{CEV}$	$V_{CE}=90\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$		6.0	mA
$I_{CEO}$	$V_{CE}=30\text{V}$		500	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=7.0\text{V}$		1.0	mA
$BV_{CEO}$	$I_C=100\text{mA}$	55		V
$BV_{CER}$	$I_C=100\text{mA}, R_{BE}=100\Omega$	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)

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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	DIMENSIONS			
	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)