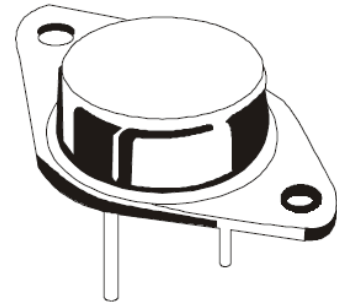


### Power Transistor (NPN)

#### Features

- General Purpose Switching and Amplifier Applications
- RoHS Compliant



TO-3



#### Mechanical Data

<b>Case:</b>	TO-3, Metal Can Package
<b>Terminals:</b>	Solderable per MIL-STD-202, Method 208
<b>Weight:</b>	20 grams (approx)

#### Maximum Ratings *(T<sub>Ambient</sub>=25°C unless noted otherwise)*

Symbol	Description	2N3055	Unit
<b>V<sub>CB0</sub></b>	Collector-Base Voltage	100	V
<b>V<sub>CEO</sub></b>	Collector-Emitter Voltage	60	V
<b>V<sub>CER</sub></b>	Collector-Emitter Voltage (R <sub>BE</sub> =100Ω)	70	V
<b>V<sub>EBO</sub></b>	Emitter-Base Voltage	7	V
<b>I<sub>C</sub></b>	Collector Current Continuous	15	A
<b>I<sub>B</sub></b>	Base Current	7	A
<b>P<sub>D</sub></b>	Total Power Dissipation at T <sub>C</sub> =25°C	115	W
	Derate above T <sub>C</sub> =25°C	0.657	W/°C
<b>R<sub>θJC</sub></b>	Thermal Resistance from Junction to Case	1.52	°C/W
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-65 to +200	°C

# Power Transistor (NPN)

## 2N3055

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

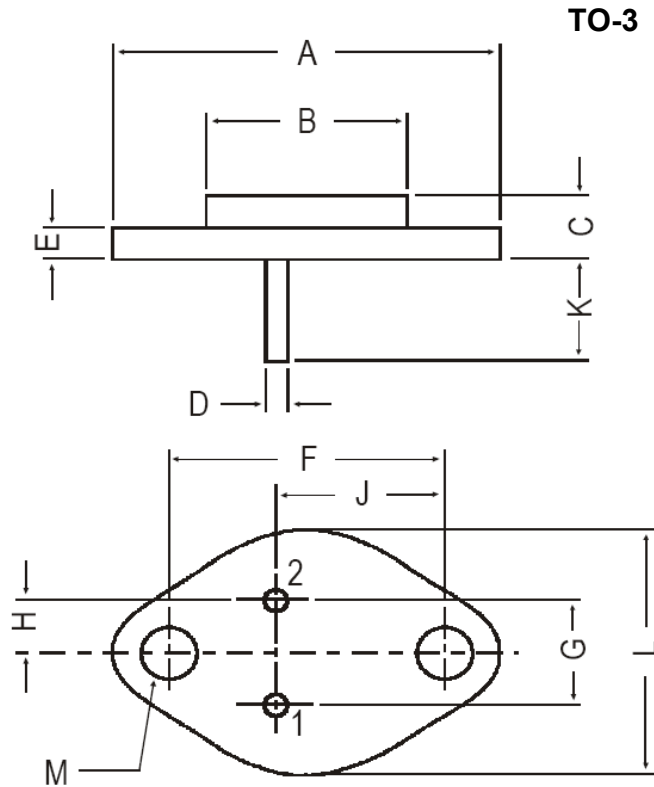
Symbol	Description	Min.	Max.	Unit	Conditions
$V_{CE(sus)}^*$	Collector-Emitter Sustaining Voltage	60		V	$I_C=200mA, I_B=0$
$V_{CER(sus)}^*$	Collector-Emitter Sustaining Voltage	70		V	$I_C=200mA, R_{BE}=100\Omega$
$h_{FE}^*$	D.C. Current Gain	20	70		$V_{CE}=4V, I_C=4A$
		5	-		$V_{CE}=4V, I_C=10A$
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	-	1.1	V	$I_C=4A, I_B=400mA$
		-	3.0	V	$I_C=10A, I_B=3.3A$
$V_{BE(on)}^*$	Base-Emitter On Voltage	-	1.5	V	$V_{CE}=4V, I_C=4A$
$I_{CEX}$	Collector-Emitter Cut-off Current	-	1.0	mA	$V_{CE}=100V, V_{BE}(off)=1.5V$
		-	5.0	mA	$V_{CE}=100V, V_{BE}(off)=1.5V, T_C=150^{\circ}C$
$I_{CEO}$	Collector-Emitter Cut-off Current	-	0.7	mA	$V_{CE}=30V, I_B=0$
$I_{EBO}$	Emitter-Base Cut-off Current	-	5.0	mA	$V_{BE}=7V, I_C=0$
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	2.87	-	A	$V_{CE}=40V, t=1.0S, \text{Nonrepetitive}$
$f_r$	Current-Gain Bandwidth Product	2.5	-	MHz	$V_{CE}=10V, I_C=0.5A, f=1MHz$
$h_{fe}$	Small Signal Current Gain	15	120		$V_{CE}=4V, I_C=1A, f=1KHz$
$f_{hfe}$	Small Signal Current Gain Cut-off Frequency	10	-	KHz	$V_{CE}=4V, I_C=1A, f=1KHz$

\*Pulse Test: Pulse Width $\leq 300\mu s$ , Duty Cycle $\leq 2\%$

# Power Transistor (NPN)

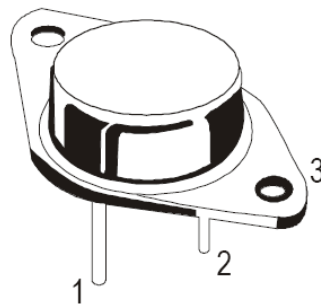
## 2N3055

### Dimensions in mm



DIM	MIN.	MAX.
A	—	39.37
B	—	22.22
C	6.35	8.50
D	0.96	1.09
E	—	1.77
F	29.90	30.40
G	10.69	11.18
H	5.20	5.72
J	16.64	17.15
K	11.15	12.25
L	—	26.67
M	3.84	4.19

All dimensions in mm.



### PIN CONFIGURATION

1. BASE
2. EMITTER
3. COLLECTOR

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