

2N5202
SILICON
NPN POWER TRANSISTOR



TO-66 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5202 is a silicon NPN power transistor 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
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Continuous Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL		UNITS
V_{CBO}	100	V
V_{CER}	75	V
V_{CEO}	50	V
V_{EBO}	6.0	V
I_C	4.0	A
I_{CM}	5.0	A
I_B	2.0	A
P_D	35	W
T_J, T_{stg}	-65 to +200	$^\circ\text{C}$
θ_{JC}	5.0	$^\circ\text{C/W}$

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

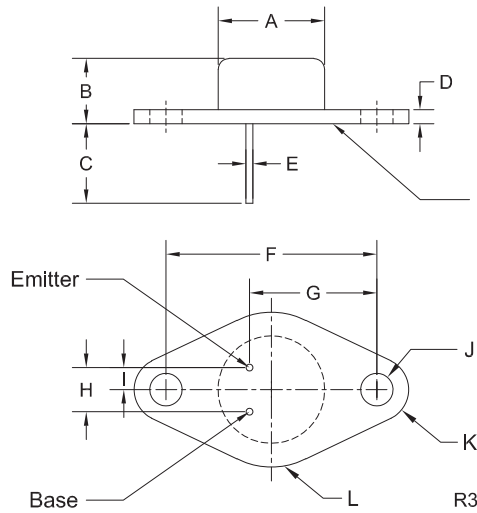
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CEV}	$V_{CE}=100\text{V}, V_{EB}=1.5\text{V}$		10	mA
I_{CEV}	$V_{CE}=100\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$		10	mA
I_{EBO}	$V_{EB}=6.0\text{V}$		10	mA
BV_{CEO}	$I_C=200\text{mA}$	50		V
BV_{CER}	$I_C=200\text{mA}, R_{BE}=50\Omega$	75		V
$V_{CE(SAT)}$	$I_C=4.0\text{A}, I_B=400\text{mA}$		1.2	V
$V_{BE(SAT)}$	$I_C=4.0\text{A}, I_B=400\text{mA}$		2.0	V
h_{FE}	$V_{CE}=1.2\text{V}, I_C=4.0\text{A}$	10	100	
$ h_{fe} $	$V_{CE}=10\text{V}, I_C=500\text{mA}$	6.0		
C_{ob}	$V_{CB}=10\text{V}, f=1.0\text{MHz}$		175	pF
$I_{s/b}$	$V_{CE}=40\text{V}, t_p=1.0\text{s}$	400		mA
$E_{s/b}$	$V_{BB}=4.0\text{V}, R_{BE}=50\Omega, L=50\mu\text{H}$	0.4		mJ
t_d	$V_{CC}=30\text{V}, I_C=4.0\text{A}, I_{B1}=I_{B2}=0.8\text{A}$		40	ns
t_r	$V_{CC}=30\text{V}, I_C=4.0\text{A}, I_{B1}=I_{B2}=0.8\text{A}$		400	ns
t_s	$V_{CC}=30\text{V}, I_C=4.0\text{A}, I_{B1}=I_{B2}=0.8\text{A}$		1200	ns
t_f	$V_{CC}=30\text{V}, I_C=4.0\text{A}, I_{B1}=I_{B2}=0.8\text{A}$		400	ns

R0 (15-January 2019)

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TO-66 CASE - MECHANICAL OUTLINE



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DIMENSIONS				
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	0.956	0.964	24.28	24.48
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)	0.141		3.58	
L (RAD)	0.345		8.76	

TO-66 (REV:R3)

R0 (15-January 2019)