

2N5333

PNP SILICON POWER TRANSISTOR



TO-39 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5333 is a PNP Silicon Power Transistor manufactured by the epitaxial planar process, mounted in a hermetically sealed metal case, designed for amplifier and switching applications.

MARKING: FULL PART NUMBER

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

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current ($t_p \leq 0.3\text{ms}$)
Continuous Base Current
Power Dissipation ($T_A=25^\circ\text{C}$)
Operating and Storage Junction Temperature
Thermal Resistance

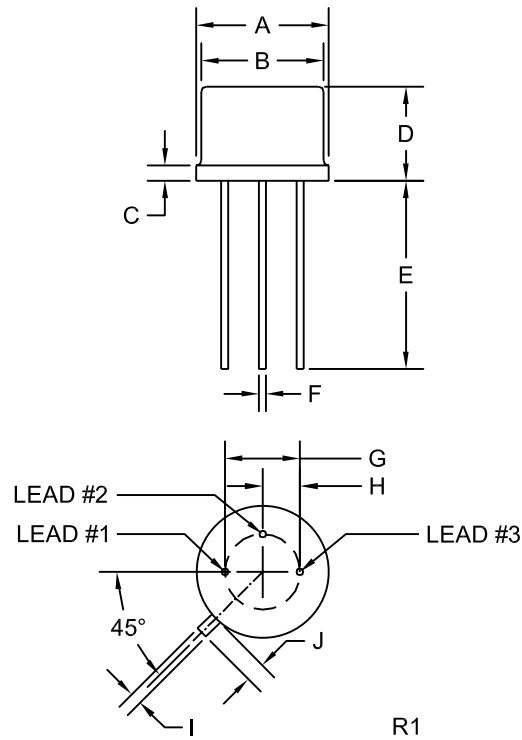
SYMBOL		UNITS
V_{CBO}	100	V
V_{CEO}	80	V
V_{EBO}	6.0	V
I_C	2.0	A
I_{CM}	5.0	A
I_B	1.0	A
P_D	1.0	W
T_J, T_{stg}	-65 to +200	$^\circ\text{C}$
Θ_{JA}	175	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CES}	$V_{CE}=90\text{V}$			10	μA
I_{CES}	$V_{CE}=50\text{V}$ ($T_C=150^\circ\text{C}$)			500	μA
I_{CEO}	$V_{CE}=40\text{V}$			50	μA
I_{EBO}	$V_{EB}=4.0\text{V}$			1.0	μA
I_{EBO}	$V_{EB}=6.0\text{V}$			100	μA
BV_{CEO}	$I_C=30\text{mA}$	80			V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$			0.45	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=400\text{mA}$			1.0	V
$V_{BE(ON)}$	$V_{CE}=4.0\text{V}, I_C=2.0\text{A}$			1.5	V
h_{FE}	$V_{CE}=4.0\text{V}, I_C=1.0\text{A}$	30		120	
h_{FE}	$V_{CE}=4.0\text{V}, I_C=2.0\text{A}$	10			
h_{fe}	$V_{CE}=10\text{V}, I_C=1.0\text{A}, f=1\text{KHz}$	30			
f_T	$V_{CE}=10\text{V}, I_C=1.0\text{A}$	30			MHz
t_{on}	{ $I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$ $V_{BE(OFF)}=3.7\text{V}, R_L=20\Omega$ }		150		ns
t_{off}			450		ns

R0 (25-September 2008)

TO-39 CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

LEAD CODE:

- 1) EMITTER
- 2) BASE
- 3) COLLECTOR (case)

MARKING: FULL PART NUMBER

R0 (25-September 2008)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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