

2N2270

NPN SILICON TRANSISTOR



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N2270 is a NPN silicon transistor, mounted in a hermetically sealed package, designed for general purpose amplifier applications.

MARKING: FULL PART NUMBER



TO-39 CASE

MAXIMUM RATINGS: (T<sub>A</sub>=25°C unless otherwise noted)

	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CBO</sub>	60	V
Collector-Emitter Voltage	V <sub>CER</sub>	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter-Base Voltage	V <sub>EBO</sub>	7.0	V
Continuous Collector Current	I <sub>C</sub>	1.0	A
Power Dissipation	P <sub>D</sub>	1.0	W
Power Dissipation (T <sub>C</sub> =25°C)	P <sub>D</sub>	5.0	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +200	°C
Thermal Resistance	θ <sub>JA</sub>	175	°C/W
Thermal Resistance	θ <sub>JC</sub>	35	°C/W

ELECTRICAL CHARACTERISTICS: (T<sub>C</sub>=25°C unless otherwise noted)

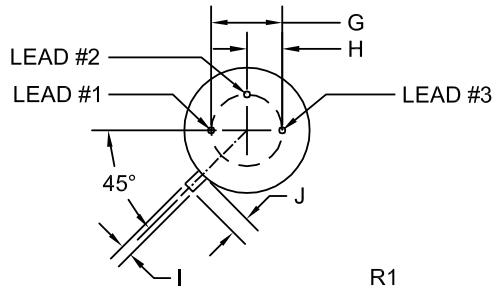
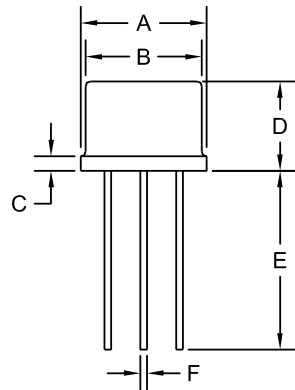
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =60V		50	nA
I <sub>CBO</sub>	V <sub>CB</sub> =60V, (T <sub>C</sub> =150°C)		50	μA
I <sub>EBO</sub>	V <sub>EB</sub> =5.0V		100	nA
BV <sub>CBO</sub>	I <sub>C</sub> =100μA	60		V
BV <sub>CER</sub>	I <sub>C</sub> =100mA, R <sub>BE</sub> =10Ω	60		V
BV <sub>CEO</sub>	I <sub>C</sub> =100mA	45		V
BV <sub>EBO</sub>	I <sub>E</sub> =100μA	7.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.9	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		1.2	V
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0mA	30		
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =150mA	50	200	
h <sub>fe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5.0mA, f=1.0kHz	50	275	
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA	100		MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0		15	pF
C <sub>ib</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0		80	pF
NF	V <sub>CE</sub> =10V, I <sub>C</sub> =0.3mA, f=1.0kHz, R <sub>G</sub> =1.0kΩ, BW=1.0Hz		10	dB

R0 (17-August 2012)

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**TO-39 CASE - MECHANICAL OUTLINE**



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

**MARKING: FULL PART NUMBER**

R0 (17-August 2012)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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