

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors  
[www.centrasemi.com](http://www.centrasemi.com)

2N696

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N696 is a Silicon NPN Transistor, mounted in a hermetically sealed metal package, designed for general purpose amplifier and switching applications.

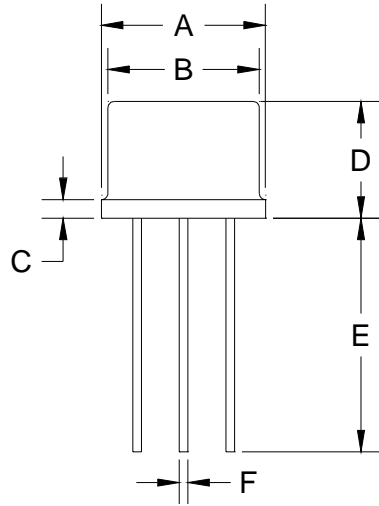
## MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	$V_{CB0}$	60	V
Collector-Emitter Voltage	$V_{CER}$	40	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Power Dissipation	$P_D$	0.6	W
Power Dissipation ( $T_C=25^{\circ}\text{C}$ )	$P_D$	2.0	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +200	$^{\circ}\text{C}$
Thermal Resistance	$\Theta_{JA}$	292	$^{\circ}\text{C}/\text{W}$
Thermal Resistance	$\Theta_{JC}$	87.5	$^{\circ}\text{C}/\text{W}$

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

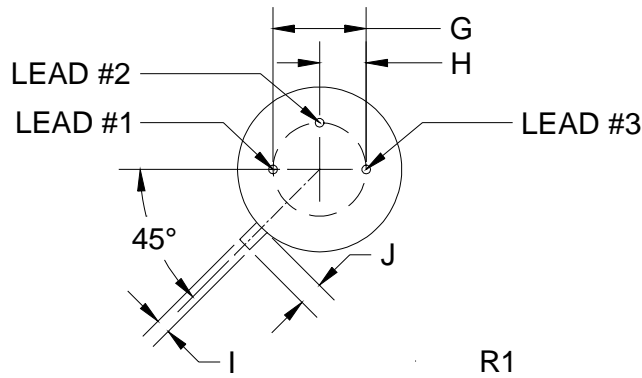
<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
$I_{CBO}$	$V_{CB}=30\text{V}$		1.0	$\mu\text{A}$
$I_{CBO}$	$V_{CB}=30\text{V}, T_A=150^{\circ}\text{C}$		100	$\mu\text{A}$
$BV_{CB0}$	$I_C=100\mu\text{A}$	60		V
$BV_{CER}$	$I_C=100\text{mA}, R_{BE}=10\Omega$	40		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.5	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.3	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	20	60	
$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=20\text{MHz}$	40		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		35	pF

TO-39 PACKAGE - 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

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