

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors
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.

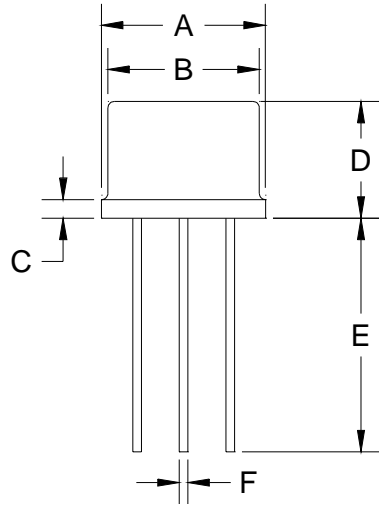
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| | <u>SYMBOL</u> | | <u>UNITS</u> |
|--|----------------|-------------|----------------------|
| Collector-Base Voltage | V_{CBO} | 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 | Θ_{JA} | 292 | $^{\circ}\text{C/W}$ |
| Thermal Resistance | Θ_{JC} | 87.5 | $^{\circ}\text{C/W}$ |

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

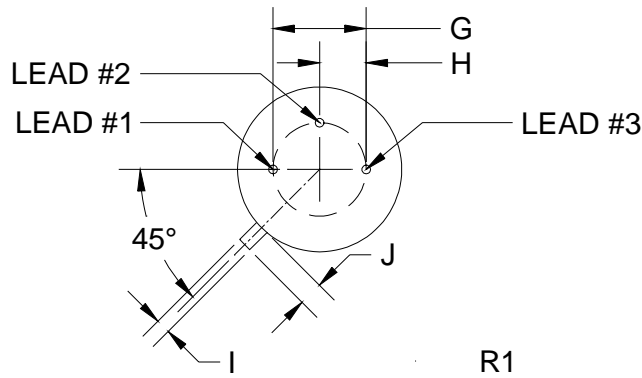
| <u>SYMBOL</u> | <u>TEST CONDITIONS</u> | <u>MIN</u> | <u>MAX</u> | <u>UNITS</u> |
|---------------|--|------------|------------|---------------|
| I_{CBO} | $V_{CB}=30\text{V}$ | | 1.0 | μA |
| I_{CBO} | $V_{CB}=30\text{V}, T_A=150^{\circ}\text{C}$ | | 100 | μA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 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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