

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

145 Adams Avenue, Hauppauge, NY 11788 USA  
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

2N699

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N699 type is an NPN Silicon Transistor designed for general purpose amplifier applications.

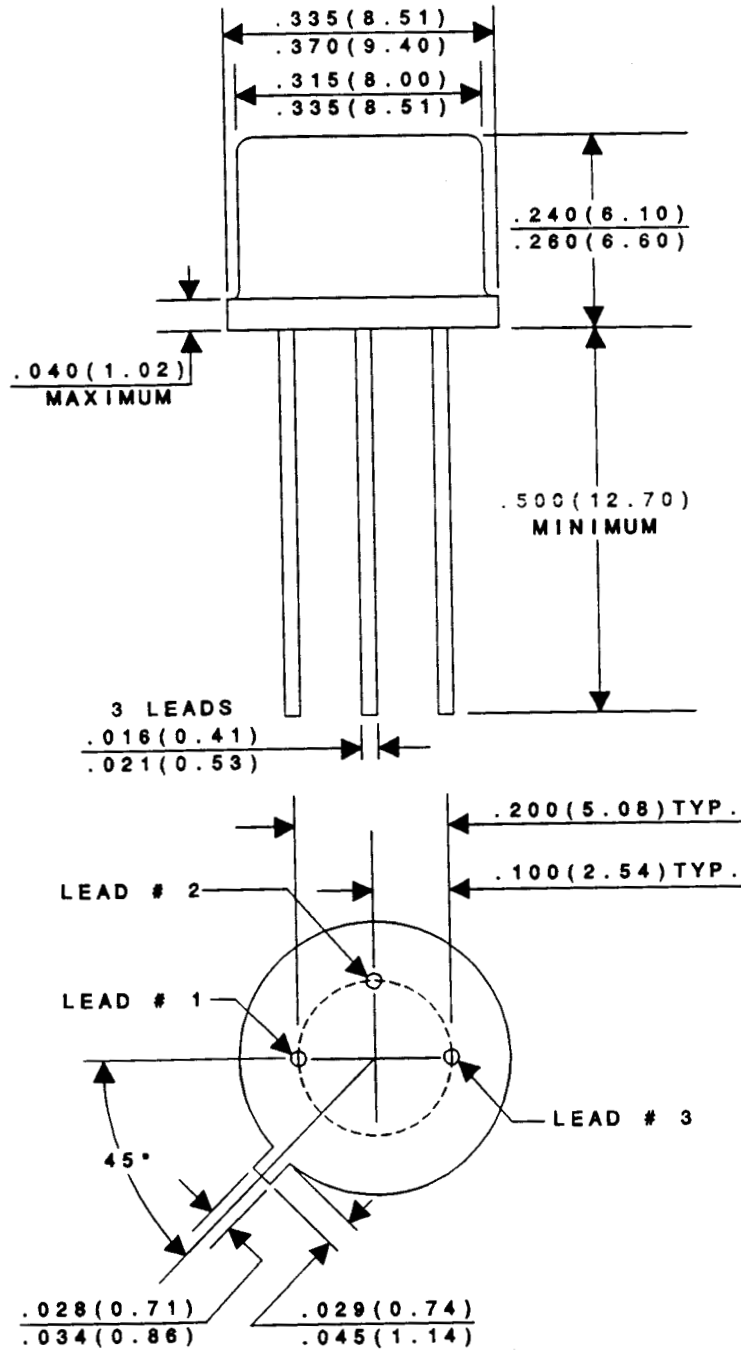
## MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	$V_{CBO}$	120	V
Collector-Emitter Voltage	$V_{CER}$	80	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 +175	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	250	$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JC}$	75	$^\circ\text{C/W}$

## 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>
$I_{CBO}$	$V_{CB}=60\text{V}$		2.0	$\mu\text{A}$
$I_{CBO}$	$V_{CB}=60\text{V}, T_A=150^\circ\text{C}$		200	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=2.0\text{V}$		100	$\mu\text{A}$
$BV_{CER}$	$I_C=10\text{mA}, R_{BE}=10\Omega$	80		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		5.0	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.3	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	40	120	
$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=20\text{MHz}$	50		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		20	pF

# JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

LEAD CODE:

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