

# 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

2N5058  
2N5059

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5058, 2N5059 types are NPN Silicon Epitaxial Planar Transistors designed for high voltage, general purpose amplifier applications.

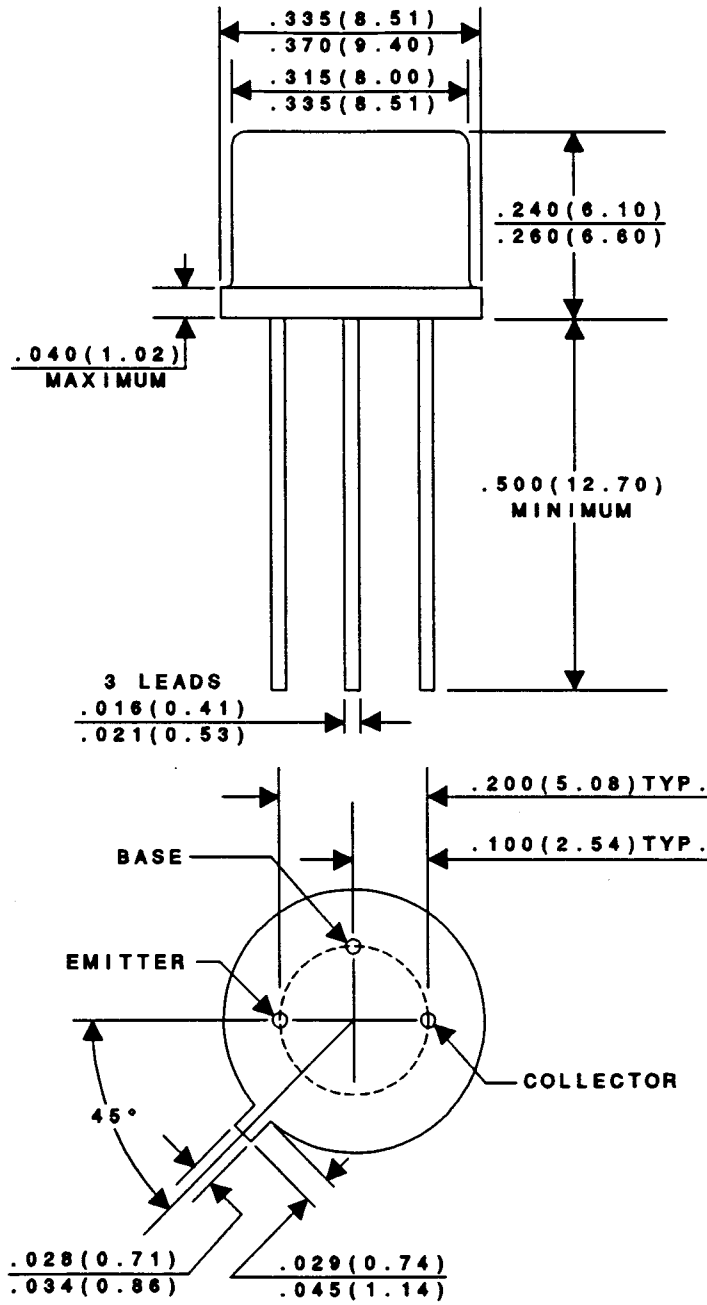
## MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

	SYMBOL	2N5058	2N5059	UNITS
Collector-Base Voltage	V <sub>CB0</sub>	300	250	V
Collector-Emitter Voltage	V <sub>CEO</sub>	300	250	V
Emitter-Base Voltage	V <sub>EBO</sub>	7.0	6.0	V
Continuous Collector Current	I <sub>C</sub>	150		mA
Power Dissipation	P <sub>D</sub>	1.0		mW
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>	150		°C/W
Thermal Resistance	θ <sub>JC</sub>	30		°C/W

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

SYMBOL	TEST CONDITIONS	2N5058		2N5059		UNITS
		MIN	MAX	MIN	MAX	
I <sub>CB0</sub>	V <sub>CB</sub> = 100V		50	50		nA
I <sub>CB0</sub>	V <sub>CB</sub> = 100V, T <sub>A</sub> = 125°C		20	20		µA
I <sub>EBO</sub>	V <sub>EB</sub> = 5.0V		10	10		nA
BV <sub>CB0</sub>	I <sub>C</sub> = 100µA	300		250		V
BV <sub>CEO</sub>	I <sub>C</sub> = 30mA	300		250		V
BV <sub>EBO</sub>	I <sub>C</sub> = 100µA	7.0		6.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> = 30mA, I <sub>B</sub> = 3.0mA		1.0	1.0		V
V <sub>BE(SAT)</sub>	I <sub>C</sub> = 30mA, I <sub>B</sub> = 3.0mA		0.85	0.85		V
V <sub>BE(ON)</sub>	V <sub>CE</sub> = 25V, I <sub>C</sub> = 30mA		0.82	0.82		V
h <sub>FE</sub>	V <sub>CE</sub> = 25V, I <sub>C</sub> = 5.0mA	10		10		
h <sub>FE</sub>	V <sub>CE</sub> = 25V, I <sub>C</sub> = 30mA	35	150	30	150	
h <sub>FE</sub>	V <sub>CE</sub> = 25V, I <sub>C</sub> = 30mA, T <sub>A</sub> = -55°C	10		-		
h <sub>FE</sub>	V <sub>CE</sub> = 25V, I <sub>C</sub> = 100mA	35		30		
f <sub>T</sub>	V <sub>CE</sub> = 25V, I <sub>C</sub> = 10mA, f = 20MHz	30	160	30	160	MHz
C <sub>cb</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f = 1.0MHz		10	10		pF
C <sub>eb</sub>	V <sub>BE</sub> = 0.5V, I <sub>C</sub> = 0, f = 1.0MHz		75	75		pF

# JEDEC TO-39 CASE - MECHANICAL DIMENSIONS



All Dimensions in Inches (mm).