

CentralTM 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.

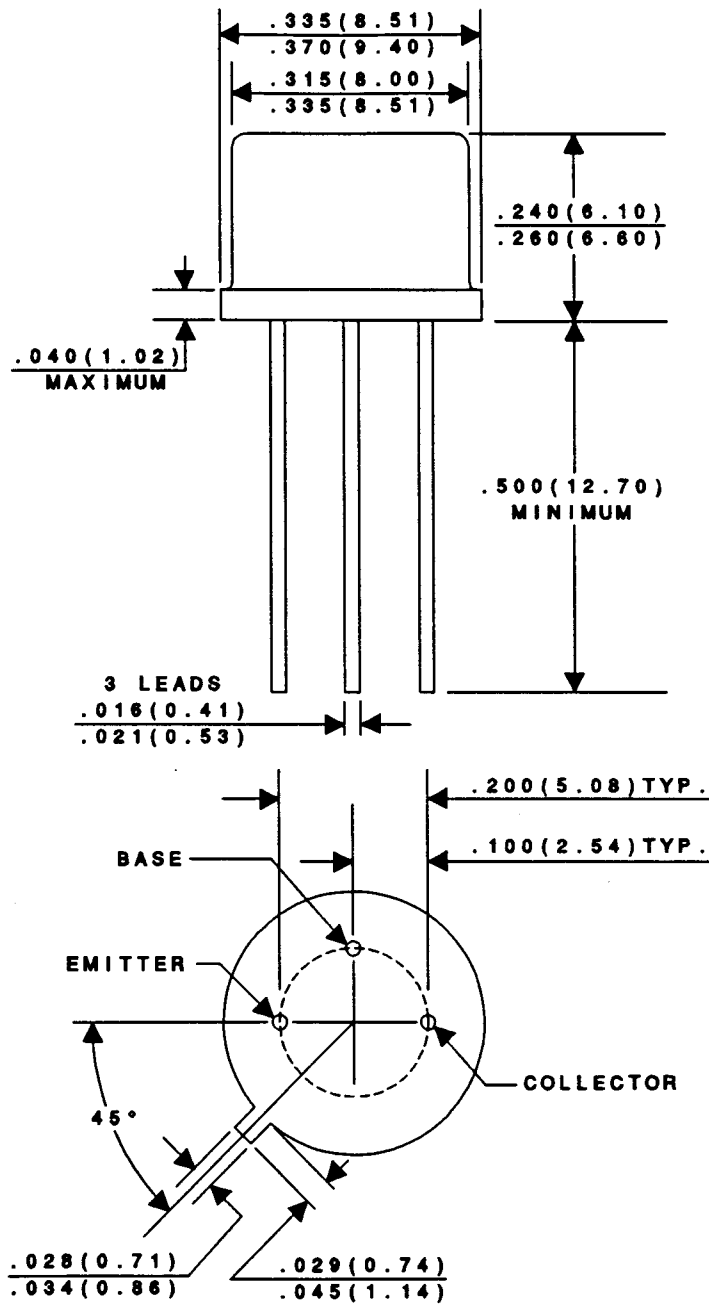
MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

	SYMBOL	2N5058	2N5059	UNITS
Collector-Base Voltage	V_{CBO}	300	250	V
Collector-Emitter Voltage	V_{CEO}	300	250	V
Emitter-Base Voltage	V_{EBO}	7.0	6.0	V
Continuous Collector Current	I_C	150		mA
Power Dissipation	P_D	1.0		mW
Power Dissipation ($T_C = 25^\circ\text{C}$)	P_D	5.0		W
Operating and Storage				
Junction Temperature	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
Thermal Resistance	θ_{JA}	150		$^\circ\text{C/W}$
Thermal Resistance	θ_{JC}	30		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	2N5058		2N5059		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB} = 100\text{V}$		50		50	nA
I_{CBO}	$V_{CB} = 100\text{V}, T_A = 125^\circ\text{C}$		20		20	μA
I_{EBO}	$V_{EB} = 5.0\text{V}$		10		10	nA
BV_{CBO}	$I_C = 100\mu\text{A}$	300		250		V
BV_{CEO}	$I_C = 30\text{mA}$	300		250		V
BV_{EBO}	$I_C = 100\mu\text{A}$	7.0		6.0		V
$V_{CE(SAT)}$	$I_C = 30\text{mA}, I_B = 3.0\text{mA}$		1.0		1.0	V
$V_{BE(SAT)}$	$I_C = 30\text{mA}, I_B = 3.0\text{mA}$		0.85		0.85	V
$V_{BE(ON)}$	$V_{CE} = 25\text{V}, I_C = 30\text{mA}$		0.82		0.82	V
h_{FE}	$V_{CE} = 25\text{V}, I_C = 5.0\text{mA}$	10			10	
h_{FE}	$V_{CE} = 25\text{V}, I_C = 30\text{mA}$	35	150	30	150	
h_{FE}	$V_{CE} = 25\text{V}, I_C = 30\text{mA}, T_A = -55^\circ\text{C}$	10		-		
h_{FE}	$V_{CE} = 25\text{V}, I_C = 100\text{mA}$	35		30		
f_T	$V_{CE} = 25\text{V}, I_C = 10\text{mA}, f = 20\text{MHz}$	30	160	30	160	MHz
C_{cb}	$V_{CB} = 10\text{V}, I_E = 0, f = 1.0\text{MHz}$		10		10	pF
C_{eb}	$V_{BE} = 0.5\text{V}, I_C = 0, f = 1.0\text{MHz}$		75		75	pF

JEDEC TO-39 CASE - MECHANICAL DIMENSIONS



All Dimensions in Inches (mm).