

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

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Manufacturers of World Class Discrete Semiconductors

2N2918

NPN SILICON  
DUAL TRANSISTOR

JEDEC TO-78 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N2918 is a silicon NPN dual transistor utilizing two individual chips mounted in a hermetically sealed metal case designed for differential amplifier applications.

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

	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CBO</sub>	45	V
Collector-Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter-Base Voltage	V <sub>EBO</sub>	6.0	V
Collector Current	I <sub>C</sub>	30	mA
Power Dissipation (One Die)	P <sub>D</sub>	300	mW
Power Dissipation (Both Dice)	P <sub>D</sub>	500	mW
Power Dissipation (One Die, T <sub>C</sub> =25°C)	P <sub>D</sub>	750	mW
Power Dissipation (Both Dice, T <sub>C</sub> =25°C)	P <sub>D</sub>	1500	mW
Operating and Storage			
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +200	°C

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =45V		10	nA
I <sub>CEO</sub>	V <sub>CE</sub> =45V		2.0	nA
I <sub>EBO</sub>	V <sub>EB</sub> =5.0V		2.0	nA
BV <sub>CBO</sub>	I <sub>C</sub> =10μA	45		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA	45		V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	6.0		V
V <sub>CE(s)</sub>	I <sub>C</sub> =1.0mA, I <sub>B</sub> =0.1mA		0.35	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100μA		0.70	V
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10μA	150	600	
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10μA, T <sub>A</sub> =-55°C	30		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100μA	225		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA	300		
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =500μA, f=20MHz	60		Mhz

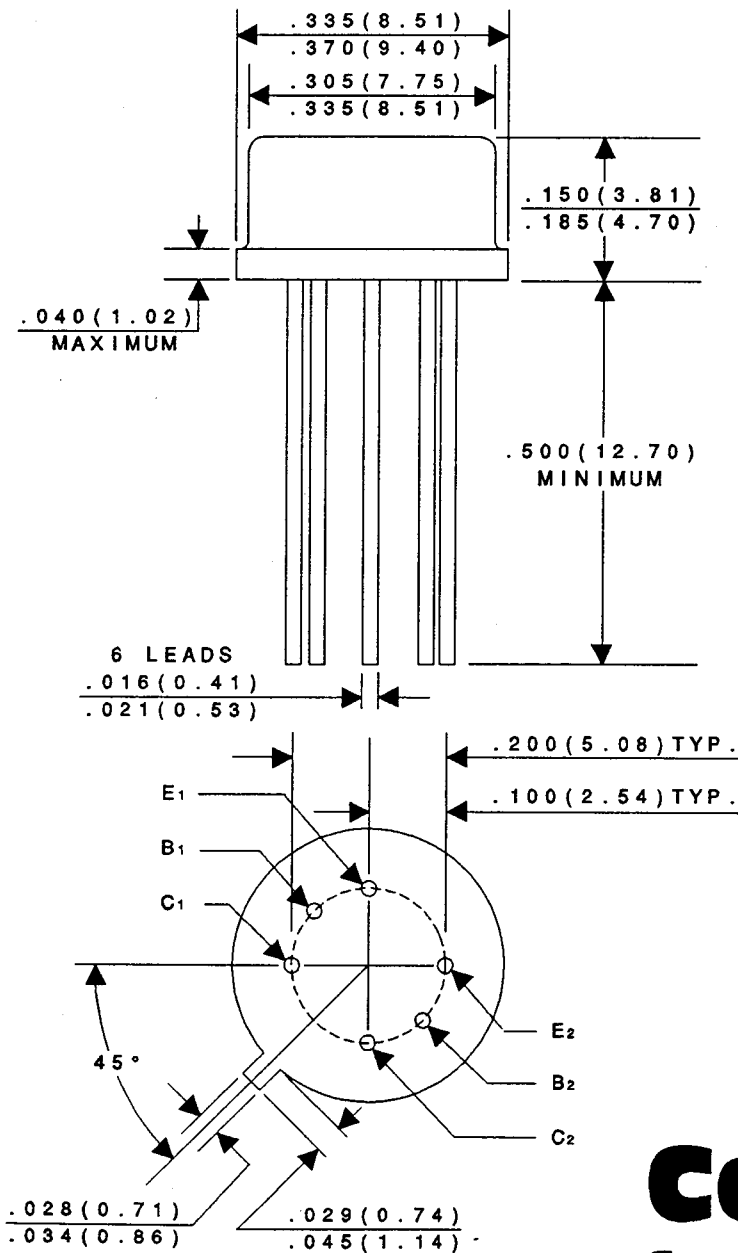
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**ELECTRICAL CHARACTERISTICS (cont.)** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
$C_{ob}$	$V_{CB}=5.0\text{V}, I_E=0, f=140\text{kHz}$		6.0	pF
NF	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}, R_S=10\text{k}\Omega, f=1.0\text{kHz}, BW=200\text{Hz}$		3.0	dB
$h_{FE1}/h_{FE2}$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	0.8	1.0	
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$		10	mV
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$		5.0	mV
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$		10	mV
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}, T_A=-55^\circ\text{C}$ to $+25^\circ\text{C}$		1.6	mV
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}, T_A=+25^\circ\text{C}$ to $+125^\circ\text{C}$		2.0	mV

**TO-78 MECHANICAL OUTLINE**

All Dimensions in inches (mm).



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