

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

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Manufacturers of World Class Discrete Semiconductors

2N5232A

NPN SILICON TRANSISTOR

JEDEC TO-92 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5232A type is a NPN Silicon Planar Epitaxial Transistors designed for low noise amplifier applications.

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

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	$V_{CB0}$	70	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	$I_C$	100	mA
Power Dissipation	$P_D$	625	mW
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	0.2	$^\circ\text{C}/\text{mW}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$I_{CBO}$	$V_{CB} = 50\text{V}$			30	nA
$I_{CBO}$	$V_{CB} = 50\text{V}, T_A = 100^\circ\text{C}$			10	$\mu\text{A}$
$I_{CES}$	$V_{CB} = 50\text{V}$			30	nA
$I_{EBO}$	$V_{EB} = 5.0\text{V}$			50	nA
$BV_{CBO}$	$I_C = 10\mu\text{A}$	70			V
$BV_{CEO}$	$I_C = 10\text{mA}$	50			V
$BV_{EBO}$	$I_C = 10\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C = 10\text{mA}, I_B = 1.0\text{mA}$			0.125	V
$V_{BE(SAT)}$	$I_C = 10\text{mA}, I_B = 1.0\text{mA}$			0.780	V
$V_{BE(ON)}$	$V_{CE} = 10\text{V}, I_C = 2.0\text{mA}$	0.500		0.900	V
$h_{FE}$	$V_{CE} = 5.0\text{V}, I_C = 2.0\text{mA}$	250		500	
$h_{fe}$	$V_{CE} = 5.0\text{V}, I_C = 2.0\text{mA}, f = 1.0\text{kHz}$	250		750	
$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1.0\text{MHz}$			4.0	pF
NF	$V_{CE} = 5.0\text{V}, I_C = 100\mu\text{A}, R_g = 5\text{k}\Omega$ $f = 1\text{kHz}, BW = 15.7\text{kHz}$		1.9	5.0	dB



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