

2N3391A  
2N3392  
2N3393

**SILICON  
NPN TRANSISTORS**



**TO-92 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N3391A series are silicon NPN transistors designed for general purpose amplifier applications.

**MARKING: FULL PART NUMBER**

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

Collector-Base Voltage	$V_{CBO}$	25	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	$I_C$	500	mA
Power Dissipation	$P_D$	625	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	200	$^\circ\text{C/W}$

SYMBOL			UNITS
$V_{CBO}$	25		V
$V_{CEO}$	25		V
$V_{EBO}$	5.0		V
$I_C$	500		mA
$P_D$	625		mW
$T_J, T_{stg}$	-65 to +150		$^\circ\text{C}$
$\theta_{JA}$	200		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=18\text{V}$		100	nA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		100	nA
$BV_{CBO}$	$I_C=10\mu\text{A}$	25		V
$BV_{CEO}$	$I_C=10\text{mA}$	25		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	5.0		V
$C_{ob}$	$V_{CB}=10\text{V}, f=1.0\text{MHz}$	2.0	10	pF
NF	$V_{CE}=4.5\text{V}, I_C=100\mu\text{A}, R_G=500\Omega,$ $BW=15.7\text{kHz}$ (2N3391A only)		5.0	dB

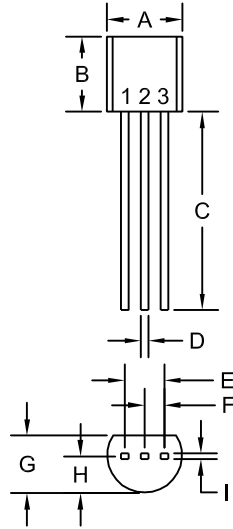
	TEST CONDITIONS	2N3391A		2N3392		2N3393	
		MIN	MAX	MIN	MAX	MIN	MAX
$h_{FE}$	$V_{CE}=4.5\text{V}, I_C=2.0\text{mA}$	250	500	150	300	90	180
$h_{fe}$	$V_{CE}=4.5\text{V}, I_C=2.0\text{mA}, f=1.0\text{kHz}$	250	800	150	500	90	400

2N3391A  
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TO-92 CASE - MECHANICAL OUTLINE



R1

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:

- 1) Emitter
- 2) Collector
- 3) Base

MARKING:

FULL PART NUMBER

R0 (29-January 2014)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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