PN4391
PN4392
PN4393

SILICON
N-CHANNEL JFETS



TO-92 CASE

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DESCRIPTION:

The CENTRAL SEMICONDUCTOR PN4391 series devices are N-Channel silicon JFETs designed for analog switching and chopper applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Gate-Drain Voltage	V_{GD}	40	V
Gate-Source Voltage	V_{GS}	40	V
Gate Current	I_G	50	mA
Power Dissipation	P_D	625	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

		PN4391		PN4392		PN4393		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{GSS}	V_{GS}=20V	-	0.1	-	0.1	-	0.1	nA
I_{GSS}	V_{GS}=20V, T_A=100°C	-	0.2	-	0.2	-	0.2	µA
I_{DSS}	V_{DS}=20V	50	150	25	75	5.0	30	mA
$I_{D(OFF)}$	V_{DS}=20V, V_{GS}=12V	-	0.1	-	-	-	-	nA
$I_{D(OFF)}$	V_{DS}=20V, V_{GS}=7.0V	-	-	-	0.1	-	-	nA
$I_{D(OFF)}$	V_{DS}=20V, V_{GS}=5.0V	-	-	-	-	-	0.1	nA
$I_{D(OFF)}$	V_{DS}=20V, V_{GS}=12V, T_A=100°C	-	0.2	-	-	-	-	µA
$I_{D(OFF)}$	V_{DS}=20V, V_{GS}=7.0V, T_A=100°C	-	-	-	0.2	-	-	µA
$I_{D(OFF)}$	V_{DS}=20V, V_{GS}=5.0V, T_A=100°C	-	-	-	-	-	0.2	µA
BV_{GSS}	I_G=1.0µA	40	-	40		40	-	V
$V_{GS(OFF)}$	V_{DS}=20V, I_D=1.0nA	4.0	10	2.0	5.0	0.5	3.0	V
$V_{GS(f)}$	V_{DS}=0, I_G=1.0mA	-	1.0	-	1.0	-	1.0	V
$V_{DS(ON)}$	I_D=12mA	-	0.4	-	-	-	-	V
$V_{DS(ON)}$	I_D=6.0mA	-	-	-	0.4	-	-	V
$V_{DS(ON)}$	I_D=3.0mA	-	-	-	-	-	0.4	V
$r_{DS(ON)}$	I_D=1.0mA, V_{GS}=0	-	30	-	60	-	100	Ω
$r_{ds(on)}$	V_{GS}=0, I_D=0, f=1.0kHz	-	30	-	60	-	100	Ω
C_{rss}	V_{GS}=12V, V_{DS}=0, f=1.0MHz	-	4.0	-	-	-	-	pF
C_{rss}	V_{GS}=7.0V, V_{DS}=0, f=1.0MHz	-	-	-	4.0	-	-	pF
C_{rss}	V_{GS}=5.0V, V_{DS}=0, f=1.0MHz	-	-	-	-	-	4.0	pF
C_{iss}	V_{DS}=20V, V_{GS}=0, f=1.0MHz	-	14	-	14	-	14	pF

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ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

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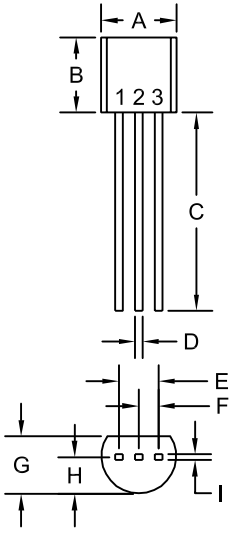
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
t_r	$I_{D(ON)}$=12mA	-	5.0	-	-	-	-	ns
t_r	$I_{D(ON)}$=6.0mA	-	-	-	5.0	-	-	ns
t_r	$I_{D(ON)}$=3.0mA	-	-	-	-	-	5.0	ns
t_f	$V_{GS(OFF)}$=12V	-	15	-	-	-	-	ns
t_f	$V_{GS(OFF)}$=7.0V	-	-	-	20	-	-	ns
t_f	$V_{GS(OFF)}$=5.0V	-	-	-	-	-	30	ns
t_{on}	$I_{D(ON)}$=12mA	-	15	-	-	-	-	ns
t_{on}	$I_{D(ON)}$=6.0mA	-	-	-	15	-	-	ns
t_{on}	$I_{D(ON)}$=3.0mA	-	-	-	-	-	15	ns
t_{off}	$V_{GS(OFF)}$=12V	-	20	-	-	-	-	ns
t_{off}	$V_{GS(OFF)}$=7.0V	-	-	-	35	-	-	ns
t_{off}	$V_{GS(OFF)}$=5.0V	-	-	-	-	-	50	ns

TO-92 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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) Drain
2) Source
3) Gate

MARKING: FULL PART NUMBER

R5 (18-August 2022)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors

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