

2N5114
2N5115
2N5116

SILICON
P-CHANNEL JFETS



TO-18 CASE



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5114, 2N5115, and 2N5116 are silicon P-Channel JFETs designed for switching applications.

MARKING: FULL PART NUMBER

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

Gate-Drain Voltage
Gate-Source Voltage
Gate Current
Power Dissipation
Operating and Storage Junction Temperature

SYMBOL		UNITS
V_{GD}	30	V
V_{GS}	30	V
I_G	50	mA
P_D	500	mW
T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	2N5114		2N5115		2N5116		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{GSS}	$V_{GS}=20\text{V}$	-	500	-	500	-	500	pA
I_{GSS}	$V_{GS}=20\text{V}, T_A=150^\circ\text{C}$	-	1.0	-	1.0	-	1.0	μA
I_{DSS}	$V_{DS}=18\text{V}$	30	90	-	-	-	-	mA
I_{DSS}	$V_{DS}=15\text{V}$	-	-	15	60	5.0	25	mA
$I_{D(OFF)}$	$V_{DS}=15\text{V}, V_{GS}=12\text{V}$	-	500	-	-	-	-	pA
$I_{D(OFF)}$	$V_{DS}=15\text{V}, V_{GS}=7.0\text{V}$	-	-	-	500	-	-	pA
$I_{D(OFF)}$	$V_{DS}=15\text{V}, V_{GS}=5.0\text{V}$	-	-	-	-	-	500	pA
$I_{D(OFF)}$	$V_{DS}=15\text{V}, V_{GS}=12\text{V}, T_A=150^\circ\text{C}$	-	1.0	-	-	-	-	μA
$I_{D(OFF)}$	$V_{DS}=15\text{V}, V_{GS}=7.0\text{V}, T_A=150^\circ\text{C}$	-	-	-	1.0	-	-	μA
$I_{D(OFF)}$	$V_{DS}=15\text{V}, V_{GS}=5.0\text{V}, T_A=150^\circ\text{C}$	-	-	-	-	-	1.0	μA
BV_{GSS}	$I_G=1.0\mu\text{A}$	30	-	30	-	30	-	V
$V_{GS(OFF)}$	$V_{DS}=15\text{V}, I_D=1.0\text{nA}$	5.0	10	3.0	6.0	1.0	4.0	V
$V_{GS(f)}$	$I_G=1.0\text{mA}$	-	1.0	-	1.0	-	1.0	V
$V_{DS(ON)}$	$I_D=15\text{mA}$	-	1.3	-	-	-	-	V
$V_{DS(ON)}$	$I_D=7.0\text{mA}$	-	-	-	0.8	-	-	V
$V_{DS(ON)}$	$I_D=3.0\text{mA}$	-	-	-	-	-	0.6	V
$r_{DS(ON)}$	$I_D=1.0\text{mA}, V_{GS}=0$	-	75	-	100	-	150	Ω
$r_{ds(ON)}$	$V_{GS}=0, I_D=0, f=1.0\text{kHz}$	-	75	-	100	-	150	Ω
C_{iss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$	-	25	-	25	-	25	pF
C_{rss}	$V_{GS}=12\text{V}, V_{DS}=0, f=1.0\text{MHz}$	-	7.0	-	-	-	-	pF
C_{rss}	$V_{GS}=7.0\text{V}, V_{DS}=0, f=1.0\text{MHz}$	-	-	-	7.0	-	-	pF
C_{rss}	$V_{GS}=5.0\text{V}, V_{DS}=0, f=1.0\text{MHz}$	-	-	-	-	-	7.0	pF

R1 (4-March 2014)

2N5114
2N5115
2N5116

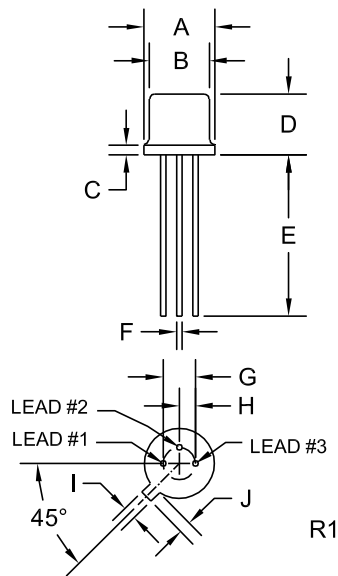
SILICON
P-CHANNEL JFETS



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

SYMBOL	TEST CONDITIONS	2N5114		2N5115		2N5116		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
t_{on}	$V_{DD}=10\text{V}, V_{GS}=12\text{V}, I_D=15\text{mA}, R_L=580\Omega$	-	16	-	-	-	-	ns
t_{on}	$V_{DD}=6.0\text{V}, V_{GS}=7.0\text{V}, I_D=7.0\text{mA}, R_L=743\Omega$	-	-	-	30	-	-	ns
t_{on}	$V_{DD}=6.0\text{V}, V_{GS}=5.0\text{V}, I_D=3.0\text{mA}, R_L=1.8\text{k}\Omega$	-	-	-	-	-	42	ns
t_{off}	$V_{DD}=10\text{V}, V_{GS}=12\text{V}, I_D=15\text{mA}, R_L=580\Omega$	-	21	-	-	-	-	ns
t_{off}	$V_{DD}=6.0\text{V}, V_{GS}=7.0\text{V}, I_D=7.0\text{mA}, R_L=743\Omega$	-	-	-	38	-	-	ns
t_{off}	$V_{DD}=6.0\text{V}, V_{GS}=5.0\text{V}, I_D=3.0\text{mA}, R_L=1.8\text{k}\Omega$	-	-	-	-	-	60	ns

TO-18 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.178	0.195	4.52	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
I	0.036	0.046	0.91	1.17
J	0.028	0.048	0.71	1.22

TO-18 (REV: R1)

LEAD CODE:

- 1) Source
- 2) Gate
- 3) Drain

MARKING: FULL PART NUMBER

R1 (4-March 2014)

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

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Product End of Life Notification

PDN ID:	PDN01101
Notification Date:	1/18/19
Last Buy Date:	7/18/19
Last Shipment Date	1/18/20

Summary: The Junction Field Effect Transistors (JFETs) listed below are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
BF244B	N/A, Stock Only
BF244C	N/A, Stock Only
BF246A	N/A, Stock Only
BSV79	N/A, Stock Only
BSV80	N/A, Stock Only
CMPFJ310 BK	N/A, Stock Only
CMPFJ310 TR	N/A, Stock Only
PN4302	N/A, Stock Only
PN5033	N/A, Stock Only
2N2608	N/A, Stock Only
2N3820	N/A, Stock Only
2N3955	N/A, Stock Only
2N4340	N/A, Stock Only
2N4341	N/A, Stock Only
2N5115	N/A, Stock Only
2N5953	N/A, Stock Only

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centrasemi.com.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.