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°C)	**SYMBOL**		**UNITS**
Gate-Drain Voltage	V_{GD}	30	V
Gate-Source Voltage	V_{GS}	30	V
Gate Current	I_G	50	mA
Power Dissipation	P_D	500	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	°C

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

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

R1 (4-March 2014)

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2N5116

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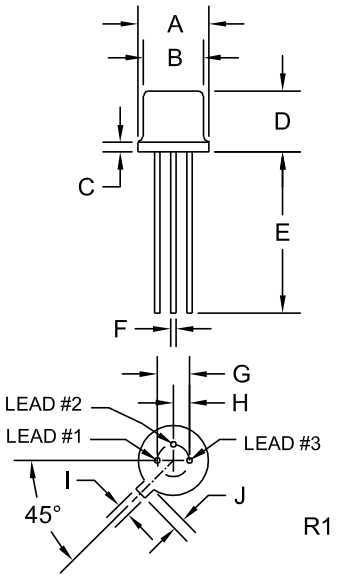
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

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

TO-18 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

- Supply management (Customer portals)
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- 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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