2N3819

SILICON
N-CHANNEL JFET

TO-92 CASE

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The CENTRAL SEMICONDUCTOR 2N3819 is a silicon N-Channel JFET designed for RF amplifier and mixer applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Gate Voltage	V_{DG}	25	V
Drain-Source Voltage	V_{DS}	25	V
Gate-Source Voltage	V_{GS}	25	V
Continuous Gate Current	I_G	10	mA
Power Dissipation	P_D	360	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{GSS}	V_{GS}=15V		2.0	nA
I_{GSS}	V_{GS}=15V, T_A=100°C		2.0	µA
I_{DSS}	V_{DS}=15V	2.0	20	mA
BV_{GSS}	I_G=1.0µA	25		V
$V_{GS(OFF)}$	V_{DS}=15V, I_D=2.0nA		8.0	V
V_{GS}	V_{DS}=15V, I_D=200µA	0.5	7.5	V
$\|Y_{fs}\|$	V_{DS}=15V, V_{GS}=0, f=1.0MHz	2.0	6.5	mS
$\|Y_{fs}\|$	V_{DS}=15V, V_{GS}=0, f=100MHz	1.6		mS
$\|Y_{os}\|$	V_{DS}=15V, V_{GS}=0, f=1.0kHz		50	µS
C_{iss}	V_{DS}=15V, V_{GS}=0, f=1.0MHz		8.0	pF
C_{rss}	V_{DS}=15V, V_{GS}=0, f=1.0MHz		4.0	pF

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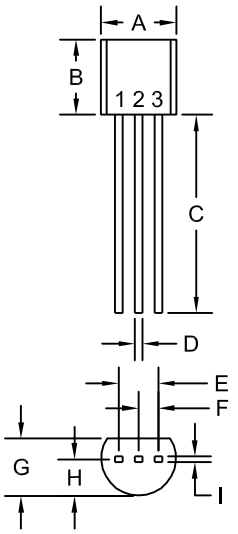
TO-92 CASE - MECHANICAL OUTLINE



R1

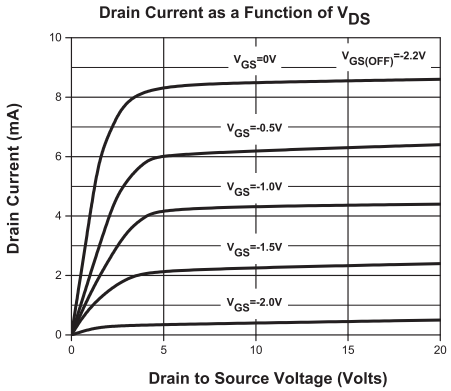
DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

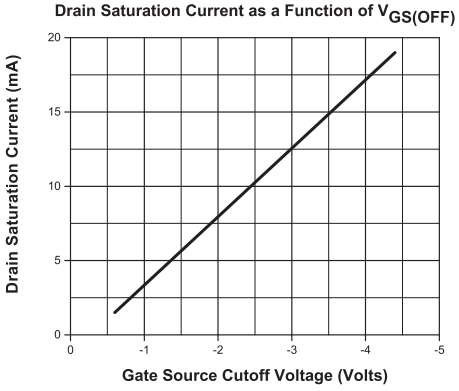
TO-92 (REV: R1)

LEAD CODE:
1) Drain
2) Gate
3) Source

MARKING:
FULL PART NUMBER

TYPICAL ELECTRICAL CHARACTERISTICS





R1 (9-January 2014)

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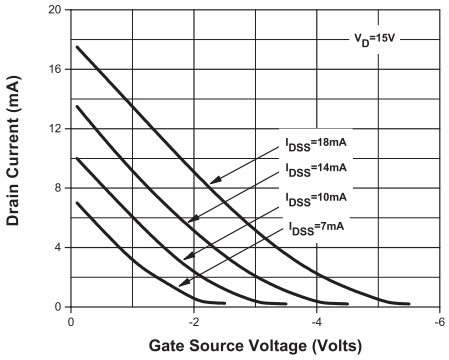
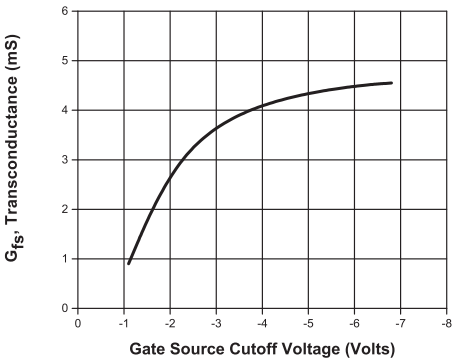
Central Semiconductor Corp.

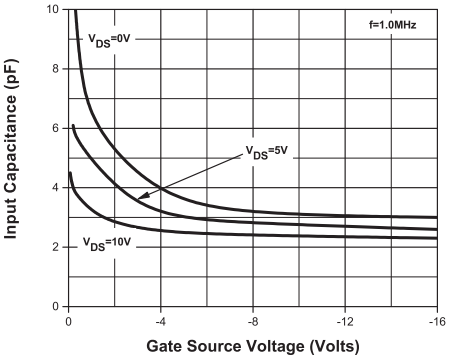
Drain Current as a Function of V_{GS}



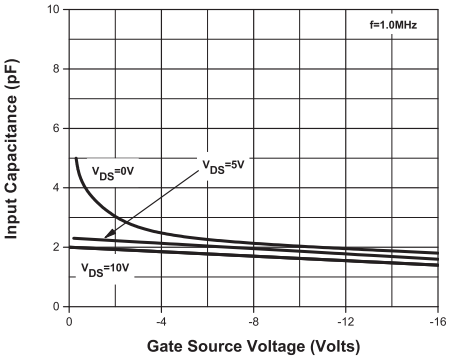
Transconductance as a Function of $V_{GS(OFF)}$



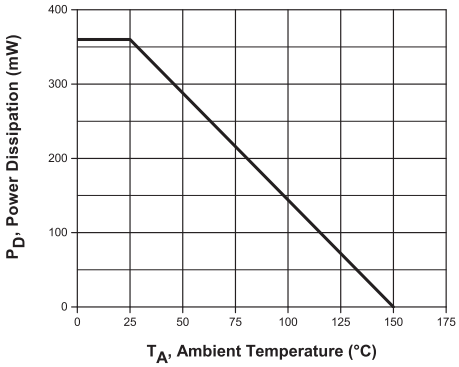
Input Capacitance vs. Gate Source Voltage



Feedback Capacitance vs. Gate Source Voltage



Power Derating



R1 (9-January 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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