

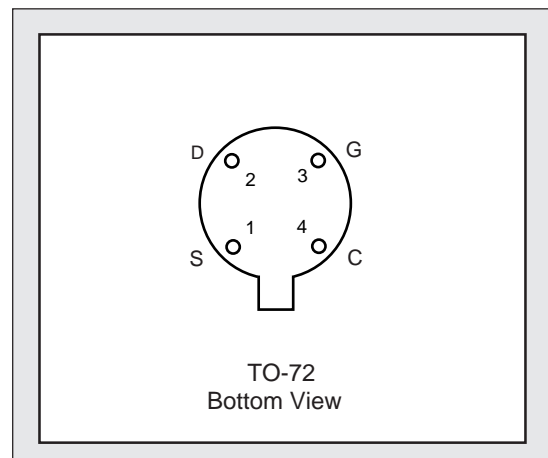
# LINEAR SYSTEMS

Linear Integrated Systems

## LS4117, 4118, 4119

### ULTRA-HIGH INPUT IMPEDANCE N-CHANNEL JFET

FEATURES	
LOW POWER	$I_{DSS} < 90 \mu A$ (2N4117)
MINIMUM CIRCUIT LOADING	$I_{GSS} < 1 pA$ (2N4117A Series)
ABSOLUTE MAXIMUM RATINGS (NOTE 1)	
@ 25°C (unless otherwise noted)	
Gate-Source or Gate-Drain Voltage (NOTE 1)	-40V
Gate-Current	50mA
Total Device Dissipation (Derate 2mW/°C to 175°C)	300mW
Storage Temperature Range	-65°C to +175°C
Lead Temperature (1/16" from case for 10 seconds)	255°C



#### ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTICS	2N4117/A FN4117/A		2N4118 2N4118A		2N4119 2N4119A		UNITS	CONDITIONS	
		MIN	MAX	MIN	MAX	MIN	MAX			
I <sub>GSS</sub>	Gate Reverse Current	--	-10	--	-10	--	-10	pA	V <sub>GS</sub> = -20V   V <sub>DS</sub> = 0	150°C
	Standard only	--	-25	--	-25	--	-25	nA		
I <sub>GSS</sub>	Gate Reverse Current	--	-1	--	-1	--	-1	pA	V <sub>GS</sub> =-20V   V <sub>DS</sub> = 0	150°C
	"A" Series only	--	-2.5	--	-2.5	--	-2.5	nA		
BV <sub>GSS</sub>	Gate-Source Breakdown Voltage	-40	--	-40	--	-40	--	V	I <sub>G</sub> =-1μA   V <sub>DS</sub> = 0	
V <sub>GS(off)</sub>	Gate-Source Cutoff Voltage	-0.6	-1.8	-1	-3	-2	-6		V <sub>DS</sub> =10V   I <sub>D</sub> = 1nA	
I <sub>DSS</sub>	Saturation Drain Current	0.03	0.09	0.08	0.24	0.20	0.60	mA	V <sub>DS</sub> =10V   V <sub>GS</sub> = 0	
	(NOTE 2) FN4117/A	0.015								
g <sub>fs</sub>	Common-Source Forward Transconductance (NOTE 2)	70	210	80	250	100	330	μmho	V <sub>DS</sub> = 10V   V <sub>GS</sub> = 0	f=1kHz
g <sub>os</sub>	Common-Source Output Conductance	--	3	--	5	--	10			
C <sub>iss</sub>	Common-Source Input Capacitance	--	3	--	3	--	3	pF	V <sub>DS</sub> = 10V   V <sub>GS</sub> = 0	f=1MHz
C <sub>rss</sub>	Common-Source Reverse Transfer Capacitance	--	1.5	--	1.5	--	1.5			

#### NOTES:

- Due to symmetrical geometry, these units may be operated with source and drain leads interchanged.
- This parameter is measured during a 2 ms interval 100 ms after power is applied. (Not a JEDEC condition.)

Linear Integrated Systems

4042 Clipper Ct., Fremont, CA 94538 TEL: (510) 490-9160 • FAX: (510) 353-0261

This datasheet has been download from:

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

Datasheets for electronics components.