

# n-channel JFET designed for . . .



PN4417

**Performance Curves NH**  
See Section 4

- VHF Amplifier
- Mixers

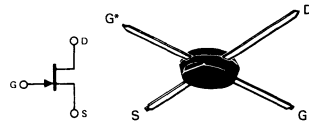
**BENEFITS**

- Low Noise  
NF = 3 dB Typical at 400 MHz
- Wide Band  
High  $g_{fs}/C_{iss}$  Ratio

**\*ABSOLUTE MAXIMUM RATINGS (25°C)**

Gate-Drain or Gate Source Voltage	-30 V
Gate Current	10 mA
Total Device Dissipation (Derate 1.4 mW/°C)	175 mW
Operating Temperature Range	-65 to +150°C
Storage Temperature Range	-65 to +200°C
Lead Temperature (1/16" from case for 60 seconds)	300°C

OD-84  
See Section 5



Note: G\* is back Gate contact.

**\*ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)**

Characteristic		Min	Max	Unit	Test Conditions
S T A T I C	$I_{GSS}$ Gate Reverse Current		-0.1	nA	$V_{GS} = -20 V, V_{DS} = 0$ 150°C
	$BV_{GSS}$ Gate-Source Breakdown Voltage	-30		$\mu A$	
	$V_{GS(off)}$ Gate-Source Cutoff Voltage		-6	V	$I_G = -1 \mu A, V_{DS} = 0$
	$I_{DSS}$ Saturation Drain Current (Note 1)	5	15	mA	$V_{DS} = 15 V, I_D = 1 nA$
D Y N A M I C	$g_{fs}$ Common-Source Forward Transconductance	4500	7500	$\mu mho$	$V_{DS} = 15 V, V_{GS} = 0$ f = 1 kHz
	$g_{os}$ Common-Source Output Conductance		50	$\mu mho$	
	$C_{rss}$ Common-Source Reverse Transfer Capacitance		0.8	pF	
	$C_{iss}$ Common-Source Input Capacitance		3.5	pF	
	$C_{oss}$ Common-Source Output Capacitance		1.3	pF	
11	$g_{iss}$ Common-Source Input Conductance	100 MHz		$\mu mho$	$V_{DS} = 15 V, V_{GS} = 0$
		Min	Max		
12	$b_{iss}$ Common-Source Input Susceptance		100		
13	$g_{oss}$ Common-Source Output Conductance		2000		
14	$b_{oss}$ Common-Source Output Susceptance		75		
15	$g_{fs}$ Common-Source Forward Transconductance (Note 1)		800		
16	$G_{ps}$ Common-Source Power Gain	18	10	4000	
17	NF Noise Figure		2	4	

\*JEDEC Registered Data.

NH

**NOTE:**

1. Pulse test duration = 300  $\mu s$ .

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