

n-channel JFET designed for . . .



KE4416

Performance Curves NH
See Section 4

- VHF Amplifiers
- Mixers

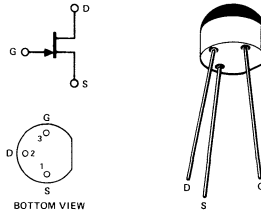
BENEFITS

- Low Noise
NF = 3 dB Typical at 400 MHz
- Wide Bandwidth
- Low Cost

ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage	- 30 V
Forward Gate Current	10 mA
Total Continuous Device Dissipation at (or Below) $T_A = 25^\circ\text{C}$ (Derate 3.5 mW/°C to 125°C)	350 mW
Storage Temperature Range	-55 to +125°C
Lead Temperature (1/16" from case for 10 seconds)	300°C

TO-106
See Section 5



ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

Characteristic		Min	Max	Unit	Test Conditions		
S T A	1 I_{GSS} Gate Reverse Current		-1.0	nA	$V_{GS} = -15\text{ V}, V_{DS} = 0$		
	2 BV_{GSS} Gate-Source Breakdown Voltage	-30		V		$I_G = -1\ \mu\text{A}, V_{DS} = 0$	
	3 $V_{GS(off)}$ Gate-Source Cutoff Voltage		-6			$V_{DS} = 15\text{ V}, I_D = 1\text{ mA}$	
	4 I_{DSS} Saturation Drain Current (Note 1)	5	15	mA			
D Y N	5 g_{fs} Common-Source Forward Transconductance (Note 1)	4500	7500	μmho	$V_{DS} = 15\text{ V}, V_{GS} = 0$		
	6 g_{os} Common-Source Output Conductance		50			f = 1 kHz	
	7 C_{rss} Common-Source Reverse Transfer Capacitance		1.0			f = 1 MHz	
	8 C_{iss} Common-Source Input Capacitance		4				
	9 C_{oss} Common-Source Output Capacitance		2				
Characteristic		100 MHz		400 MHz		Unit	Test Conditions
		Min	Max	Min	Max		
H I	10 g_{iss} Common-Source Input Conductance		100		1000	μmho	$V_{DS} = 15\text{ V}, V_{GS} = 0$
	11 b_{iss} Common-Source Input Susceptance		2500		10,000		
	12 g_{oss} Common-Source Output Conductance		75		100		
	13 b_{oss} Common-Source Output Susceptance		1000		4000		
F R E Q	14 g_{fs} Common-Source Forward Transconductance (Note 1)			4000		dB	$V_{DS} = 15\text{ V}, I_D = 5\text{ mA}$
	15 G_{ps} Common-Source Power Gain	18		10			
	16 NF Noise Figure		2		4		

NOTE:

1. Pulse test duration = 300 μs .

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