

n-channel JFET designed for . . .



**Performance Curves NRL/
NPA/NH See Section 4**

- **General Purpose Amplifiers**
- **Analog Switches**

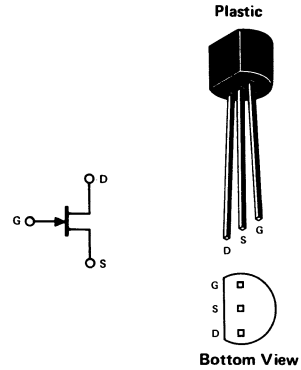
BENEFITS

- Low Cost
- Automatic Insertion Package

ABSOLUTE MAXIMUM RATINGS (25°C)

Drain-Gate Voltage 20V
 Source-Gate Voltage 20V
 Drain-Source Voltage 20V
 Forward Gate Current 10 mA
 Total Device Dissipation at 25°C Ambient
 (Derate 3.27 mW/°C) 360 mW
 Operating Temperature Range -55 to 135°C
 Storage Temperature Range -55 to 150°C
 Lead Temperature Range
 (1/16" from case for 10 seconds) 300°C

TO-92
See Section 6



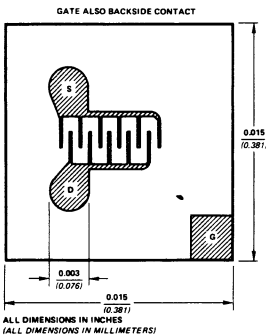
ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

Characteristic		Min	Typ	Max	Unit	Test Conditions	
S T A T I C	I _{GSS} Gate-Reverse Current		-.01	-100	nA	V _{GS} = -10 V, V _{DS} = 0	
	BV _{GSS} Gate-Source Breakdown Voltage	-20			V	I _G = -10 μA, V _{DS} = 0	
	V _{GS(off)} Gate-Source Cutoff Voltage	-0.5		-10.0		V _{DS} = 10 V, I _D = 1 μA	
	I _{DSS} Saturation Drain Current	0.5		20	mA	V _{DS} = 10 V, V _{GS} = 0 (Note 1)	
D Y N A M I C	g _{fs} Common-Source Forward Transconductance	500			μmho	V _{DS} = 10 V, V _{GS} = 0	f = 1 kHz
	g _{os} Common-Source Output Conductance		10				
	C _{iss} Common-Source Input Capacitance		4.5		pF		f = 1 MHz
	C _{rss} Common-Source Reverse Transfer Capacitance		1.0				

NRL/NPA/NH

NOTE:

1. Pulse test PW ≤ 630 msec, duty cycle ≤ 10%.



n-channel JFET designed for . . .

- VHF/UHF Amplifiers
- Oscillators
- Mixers
- Low Input Capacitance High Speed Switch



BENEFITS:

- Low Noise
NF = 3 dB Typical @ 400 MHz
- Wideband
High g_{fs}/C_{iss} Ratio

TYPE	PACKAGE
Single	TO-72
Single	TO-92
Single	Chip

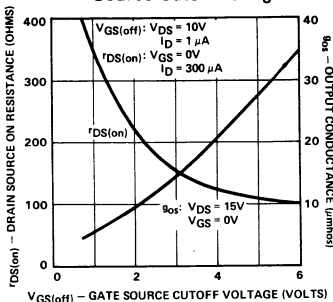
PRINCIPAL DEVICES

2N3966, 2N4416-16A, 2N3819, 2N4223-4, 2N5484-6, 2N5555, 2N5668-70, MPF102, MPF108, MPF112, PN4416, J304-5, MPF109, MPF111

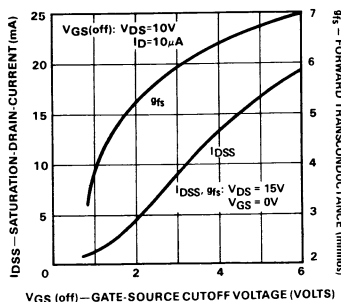
All of the above devices

PERFORMANCE CURVES (25°C unless otherwise noted)

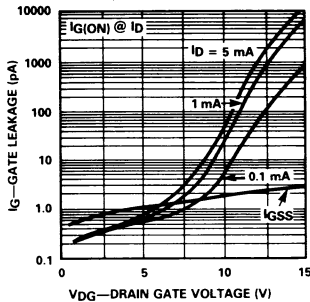
On Resistance & Output Conductance vs Gate-Source Cutoff Voltage



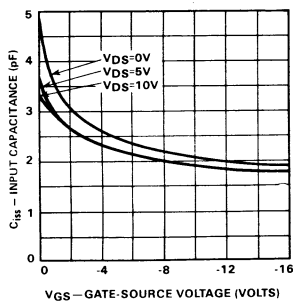
Drain Current & Transconductance vs Gate-Source Cutoff Voltage



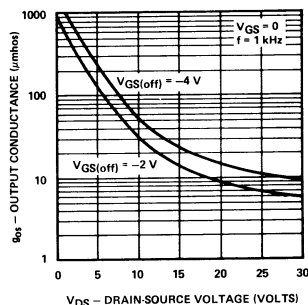
Gate Operating Current vs Drain-Gate Voltage



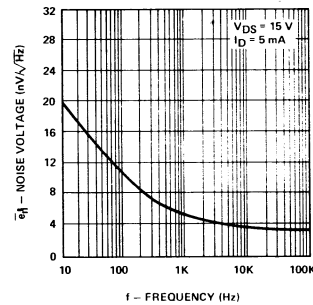
Common Source Input Capacitance vs Gate-Source Voltage



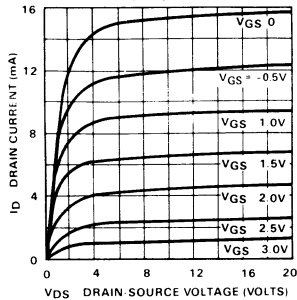
Common-Source Output Conductance vs Drain-Source Voltage



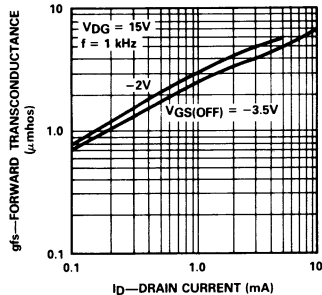
Equivalent Input Noise Voltage vs Frequency



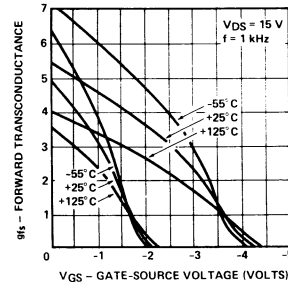
Output Characteristic (VGS(off) = -4.0V)



Transconductance vs Drain Current



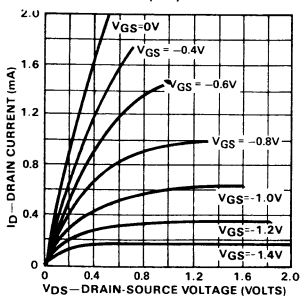
Transconductance Characteristics



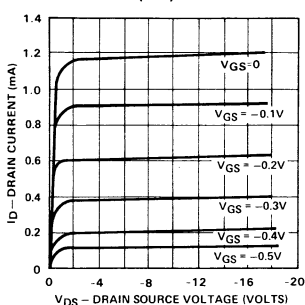
PERFORMANCE CURVES (Cont'd) (25°C unless otherwise noted)



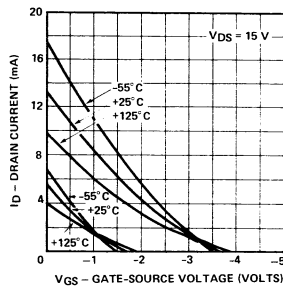
Output Characteristic
($V_{GS(off)} = -2V$)



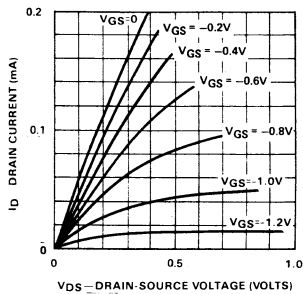
Output Characteristic
($V_{GS(off)} = -1.0V$)



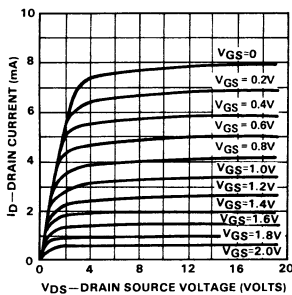
Transfer Characteristics



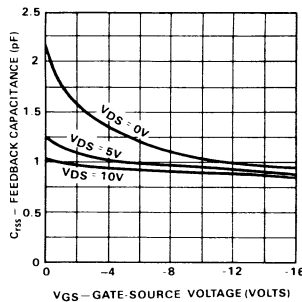
Output Characteristic
($V_{GS(off)} = -1.5V$)



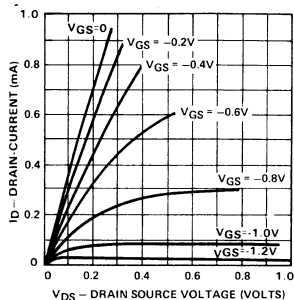
Output Characteristic
($V_{GS(off)} = -3.0V$)



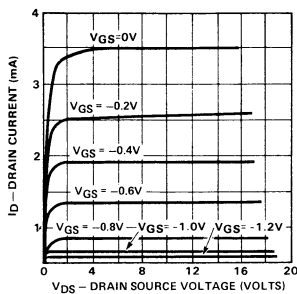
Common Source Reverse Feedback Capacitance vs Gate Source Voltage



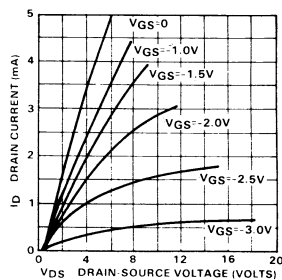
Output Characteristic
($V_{GS(off)} = -1.5V$)



Output Characteristic
($V_{GS(off)} = -1.5V$)

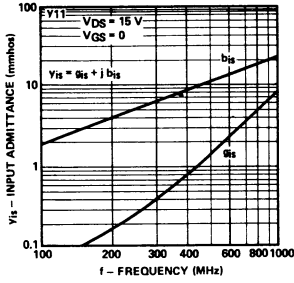


Output Characteristic
($V_{GS(off)} = -4.0V$)

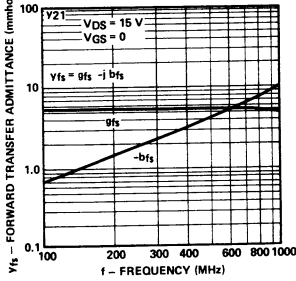


PERFORMANCE CURVES (Cont'd) (25°C unless otherwise noted)

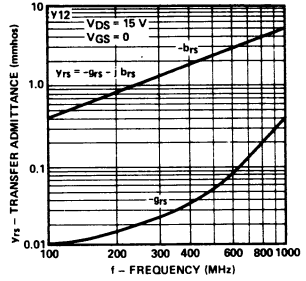
Common-Source Input Admittance vs Frequency



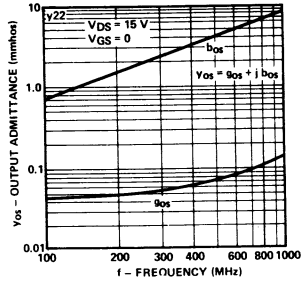
Common-Source Forward Transfer Admittance vs Frequency



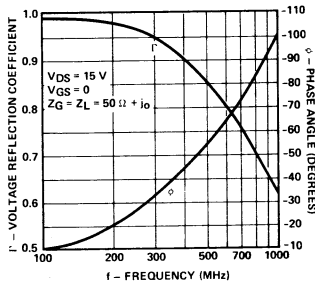
Common-Source Reverse Transfer Admittance vs Frequency



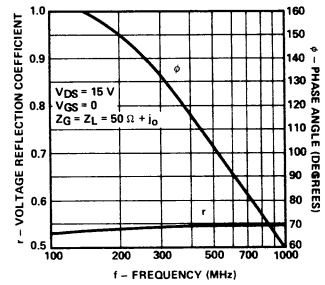
Common-Source Output Admittance vs Frequency



S Parameters S11 Common-Source vs Frequency



S Parameters S21 Common-Source vs Frequency



S Parameters S22 Common-Source vs Frequency

