NJ132L Process

Silicon Junction Field-Effect Transistor

- Low-Noise Amplifier

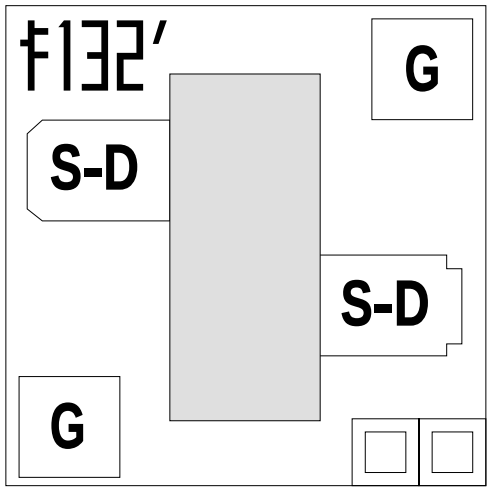
Absolute maximum ratings at TA = 25°C

Gate Current, Ig	10 mA
Operating Junction Temperature, Tj	+150°C
Storage Temperature, Ts	– 65°C to +175°C

Devices in this Databook based on the NJ132L Process.

Datasheet

2N6451, 2N6452
2N6453, 2N6454
IF1320
IFN152
2SK152



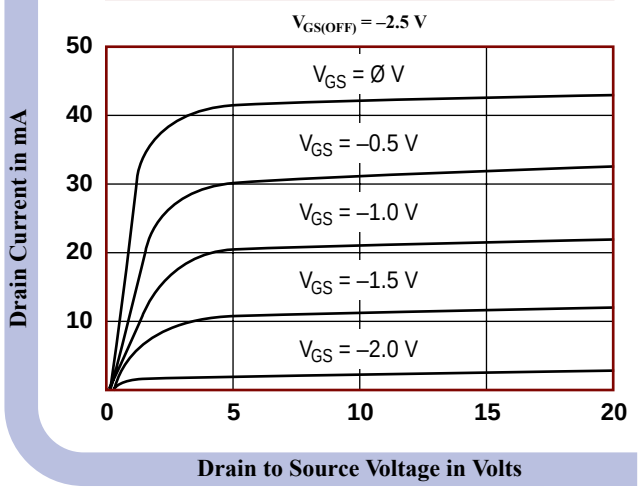
Die Size = 0.022" X 0.022"
All Bond Pads = 0.004" Sq.
Substrate is also Gate.

At 25°C free air temperature:

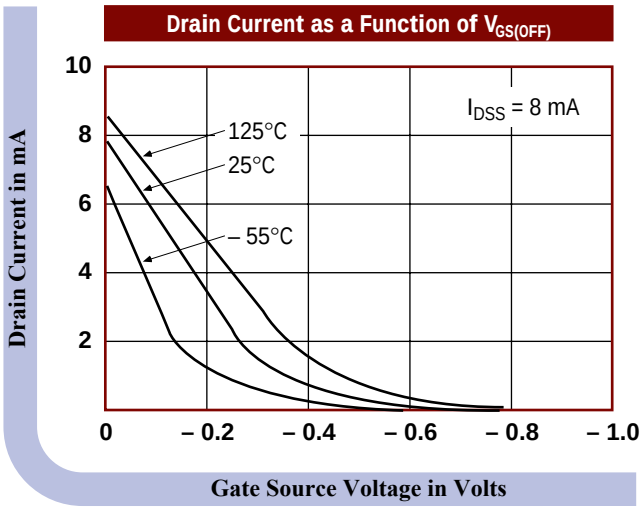
Static Electrical Characteristics		NJ132L Process Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 15	– 25		V	I_G = – 1 µA, V_{DS} = ØV	
Reverse Gate Leakage Current	I_{GSS}		– 50	– 100	nA	V_{GS} = – 10V, V_{DS} = ØV	
Drain Saturation Current (Pulsed)	I_{DSS}	5		100	mA	V_{DS} = 10V, V_{GS} = ØV	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.5		– 7	V	V_{DS} = 10V, I_D = 1 nA	
Dynamic Electrical Characteristics							
Forward Transconductance (pulsed)	g_{fs}	15			mS	V_{DS} = 10V, V_{GS} = ØV	f = 1 kHz
	g_{fs}		15		mS	V_{DS} = 10V, I_D = 5 mA	f = 1 kHz
Input Capacitance	C_{iss}		15		pF	V_{DS} = 10V, V_{GS} = ØV	f = 1 MHz
Feedback Capacitance	C_{iss}		3.5		pF	V_{DS} = ØV, V_{GS} = – 10V	f = 1 MHz
Equivalent Noise Voltage	$\bar{e}_N$		1		nV/√HZ	V_{DS} = 4V, I_D = 5 mA	f = 1 kHz

InterFET Corporation
1000 N. Shiloh Road, Garland, TX 75042
(972) 487-1287 FAX (972) 276-3375
www.interfet.com

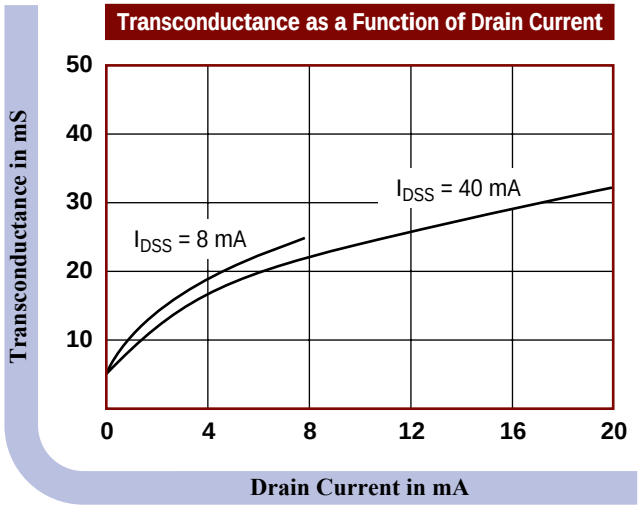
Drain Current as a Function of V_{DS}



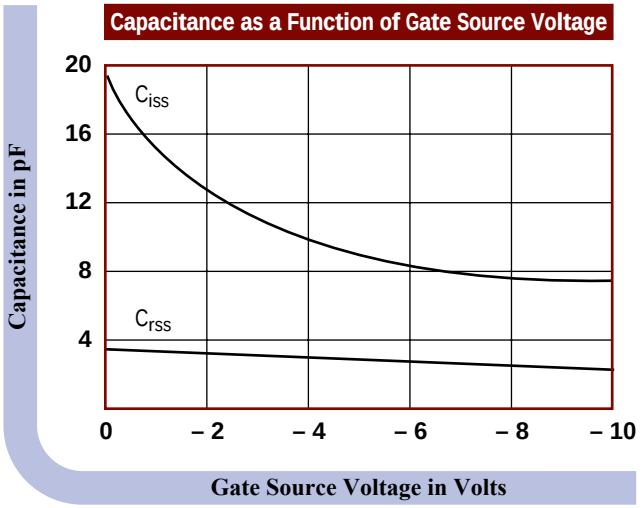
Drain Current as a Function of $V_{GS(OFF)}$



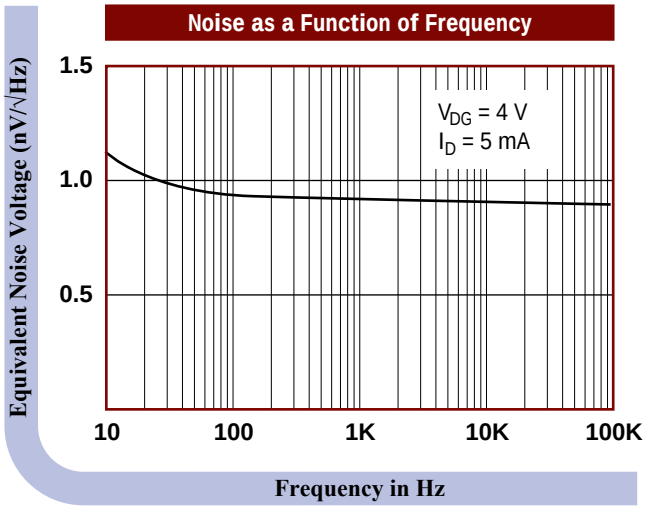
Transconductance as a Function of Drain Current



Capacitance as a Function of Gate Source Voltage



Noise as a Function of Frequency



Noise as a Function of Temperature