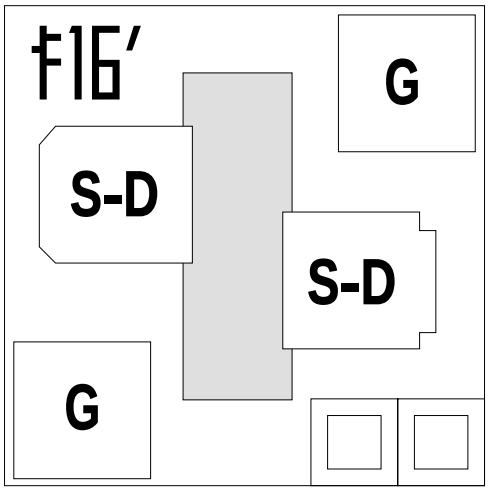
NJ16 Process

Silicon Junction Field-Effect Transistor

- Low Current Switch
- General Purpose Amplifier
- High Breakdown Voltage



Die Size = 0.017" X 0.017"
All Bond Pads = 0.004" Sq.
Substrate is also Gate.

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

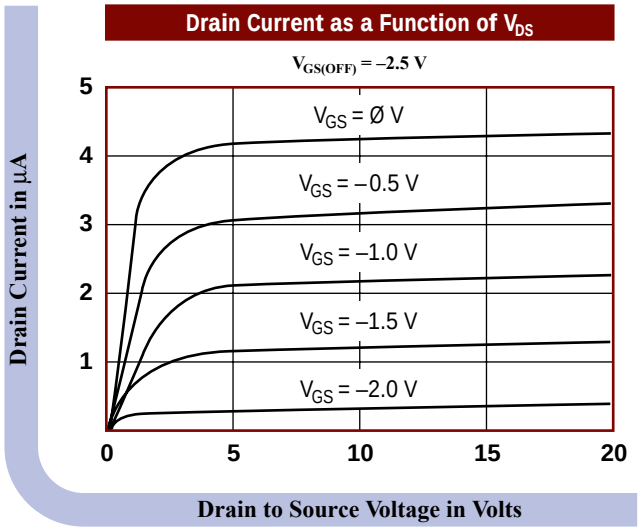
Devices in this Databook based on the NJ16 Process.

Datasheet	Datasheet	Datasheet
2N3954, 2N3955	2SK17, 2SK40	J504, J505
2N3956	2SK59, 2SK105	J506, J507
2N3957, 2N3958	IFN17, IFN40	J508, J509
2N4220, 2N4220A	IFN59, IFN105	J510, J511
2N4221, 2N4221A	J201, J202	J553, J554
2N4338, 2N4339	J203, J204	J555, J556
2N4340, 2N4341	J230, J231	J557
2N4867, 2N4867A	J232	U553, U554
2N4868, 2N4868A	J500, J501	U555, U556
2N4869, 2N4869A	J502, J503	U557
		VCR4N

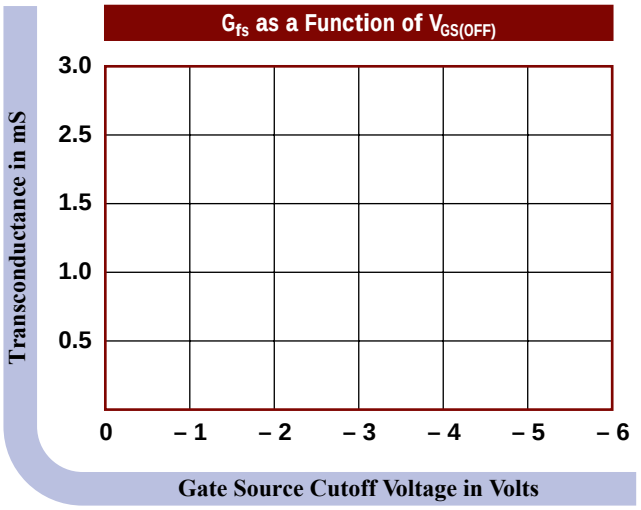
At 25°C free air temperature:		NJ16 Process					
Static Electrical Characteristics		**Min**	**Typ**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 50	– 60		V	I_G = – 1 µA, V_{DS} = ØV	
Reverse Gate Leakage Current	I_{GSS}		– 10	– 100	pA	V_{GS} = – 30V, V_{DS} = ØV	
Drain Saturation Current (Pulsed)	I_{DSS}	0.2		9	mA	V_{DS} = 15V, V_{GS} = ØV	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.8		– 5.5	V	V_{DS} = 15V, I_D = 1 nA	
Dynamic Electrical Characteristics							
Forward Transconductance	g_{fs}		2.2		mS	V_{DS} = 15V, V_{GS} = ØV	f = 1 kHz
Input Capacitance	C_{iss}		3.5		pF	V_{DS} = 15V, V_{GS} = ØV	f = 1 MHz
Feedback Capacitance	C_{rss}		1.2		pF	V_{DS} = 15V, V_{GS} = ØV	f = 1 MHz
Equivalent Noise Voltage	$\bar{e}_N$		6		nV/√HZ	V_{DS} = 10V, 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

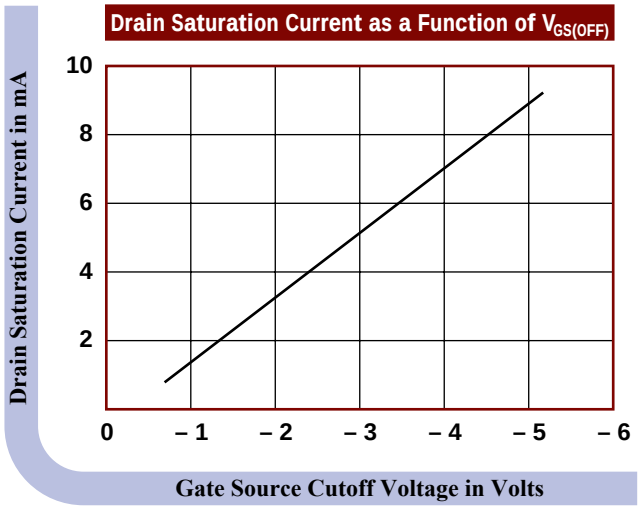
Drain Current as a Function of V_{DS}



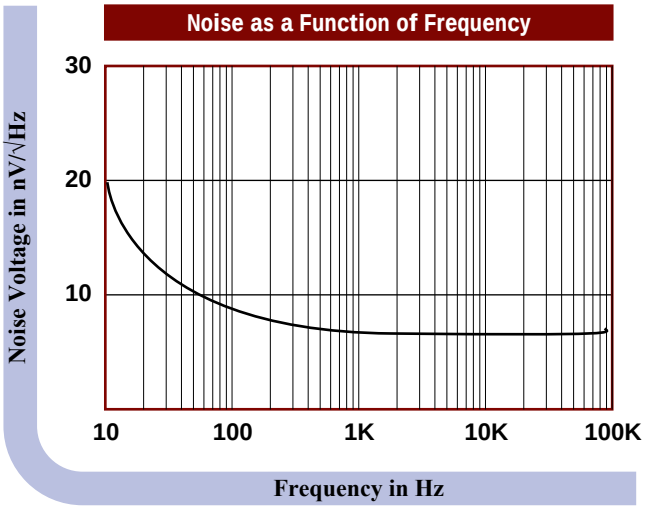
G_{fs} as a Function of $V_{GS(OFF)}$



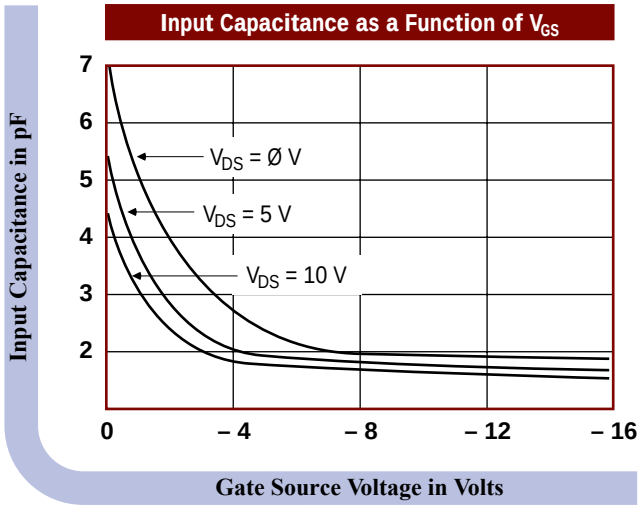
Drain Saturation Current as a Function of $V_{GS(OFF)}$



Noise as a Function of Frequency



Input Capacitance as a Function of V_{GS}



Feedback Capacitance as a Function of V_{GS}

