NJ903 Process

Silicon Junction Field-Effect Transistor

- Analog Switch
- Digital Switch
- Low-Noise Amplifier

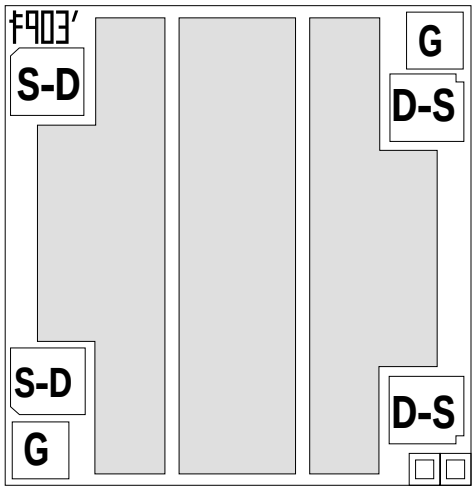
Absolute maximum ratings at TA = 25°C

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 NJ903 Process.

Datasheet

IFN5432
IFN5433
IFN5434



Die Size = 0.040" X 0.040"
All Bond Pads = 0.004" Sq.
Substrate is also Gate.

At 25°C free air temperature:		NJ903 Process					
Static Electrical Characteristics		**Min**	**Typ**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 25	– 40		V	I_G = – 1 µA, V_{DS} = ØV	
Reverse Gate Leakage Current	I_{GSS}		– 0.1	– 1	nA	V_{GS} = – 15V, V_{DS} = ØV	
Drain Saturation Current (Pulsed)	I_{DSS}	100		900	mA	V_{DS} = 10V, V_{GS} = ØV	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 2		– 7	V	V_{DS} = 10V, I_D = 1 nA	
Dynamic Electrical Characteristics							
Drain Source ON Resistance	$r_{ds(on)}$		5		Ω	I_D = 1 mA, V_{GS} = Ø	f = 1 kHz
Input Capacitance	C_{iss}		45		pF	V_{DS} = ØV, V_{GS} = – 10V	f = 1 MHz
Feedback Capacitance	C_{iss}		22		pF	V_{DS} = ØV, V_{GS} = – 10V	f = 1 MHz
Turn On Delay Time	$t_{d(on)}$		7		ns	V_{DD} = 1.5V, $I_{D(ON)}$ = 30 mA R_L = 50Ω, $V_{GS(ON)}$ = ØV $V_{GS(OFF)}$ = – 7V	
Rise Time	t_r		1		ns		
Turn Off Delay Time	$t_{d(off)}$		12		ns		
Fall Time	t_f		2		ns		

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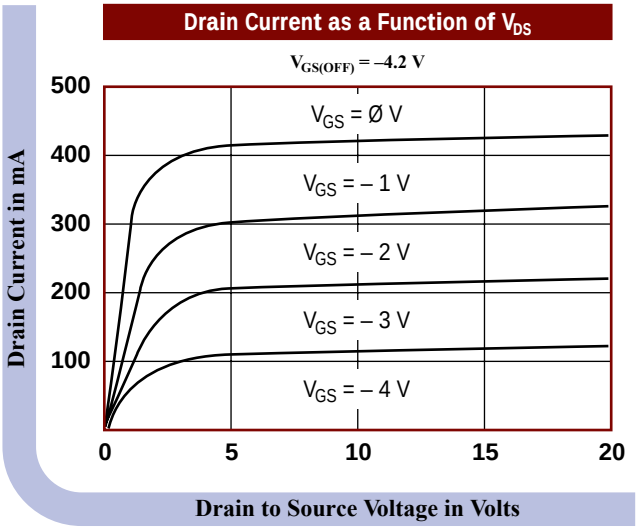
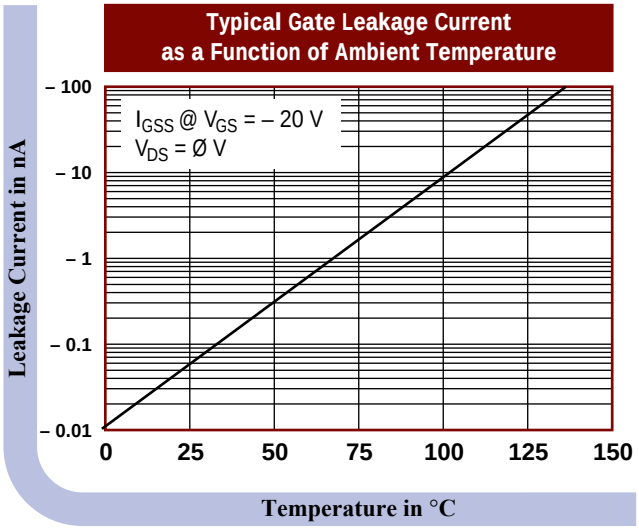
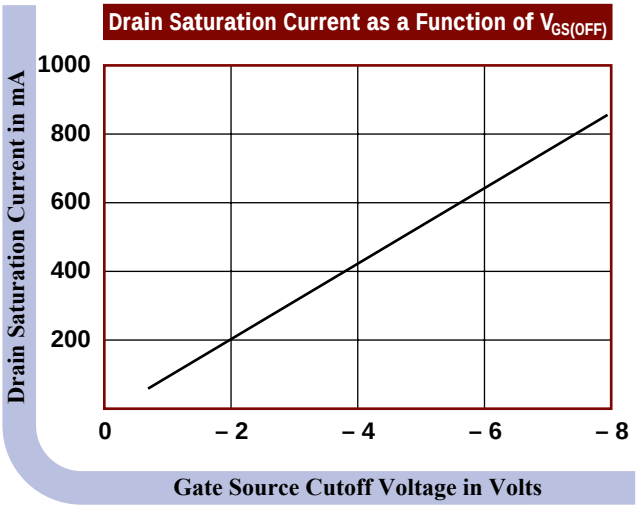
Drain Current as a Function of V_{DS}



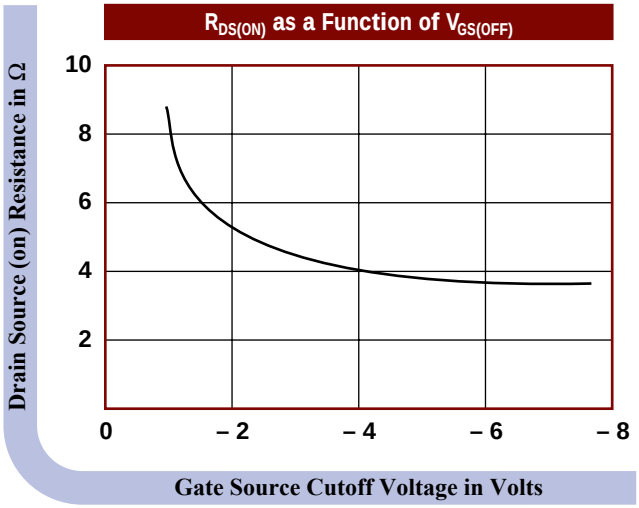
Typical Gate Leakage Current as a Function of Ambient Temperature



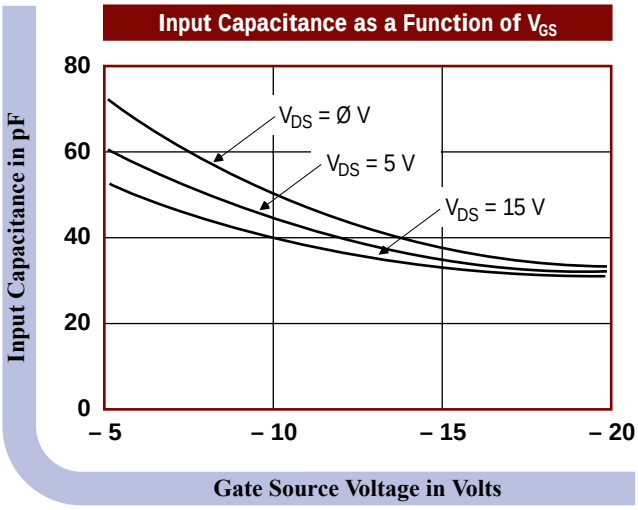
Drain Saturation Current as a Function of $V_{GS(OFF)}$



$R_{DS(ON)}$ as a Function of $V_{GS(OFF)}$



Input Capacitance as a Function of V_{GS}



Feedback Capacitance as a Function of V_{GS}