F-22

NJ36D Process

Silicon Junction Field-Effect Transistor

- Monolithic Dual Construction
- High Frequency Amplifier
- Low-Noise Amplifier

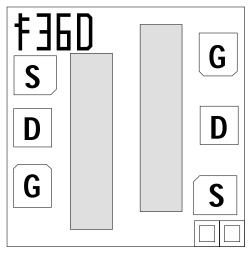
Absolute maximum ratings at TA = 25°C

Gate Current, Ig 10 mA Operating Junction Temperature, Tj $+150^{\circ}$ C Storage Temperature, Ts -65° C to $+175^{\circ}$ C

Devices in this Databook based on the NJ36D Process.

Datasheet

2N5911, 2N5912 IFN5911, IFN5912



Die Size = 0.026" X 0.026" All Bond Pads = 0.004" Sq. Substrate is also Gate.

At 25°C free air temperature:			NJ36D Process						
Static Electrical Characteristics		Min	Тур	Max	Unit	Test Conditions			
Gate Source Breakdown Voltage	V _{(BR)GSS}	- 25	- 35		V	$I_G = -1 \text{ mA}, V_{DS} = \emptyset V$			
Reverse Gate Leakage Current	I _{GSS}		0.05	0.1	nA	$V_{GS} = -15 V$, $V_{DS} = \emptyset V$			
Drain Saturation Current (Pulsed)	I _{DSS}	1		40	mA	$V_{DS} = 15 V$, $V_{GS} = \emptyset V$			
Gate Source Cutoff Voltage	V _{GS(OFF)}	- 0.5		- 8	V	V _{DS} = 15 V, I _D = 1 nA			

Dynamic Electrical Characteristics

Drain Source ON Resistance	r _{ds(on)}	90		250	Ω	$I_D = \emptyset \text{ mA}, V_{GS} = \emptyset V$	f = 1 kHz
Forward Transconductance	9 _{fs}		8.5		mS	$V_{DS} = 15 V$, $V_{GS} = \emptyset V$	f = 1 kHz
Input Capacitance	C _{iss}		5.5	7.0	pF	$V_{DS} = 10 \text{V}, V_{GS} = \emptyset \text{V}$	f = 1 MHz
Feedback Capacitance	C _{rss}		1.5	3	pF	$V_{DS} = 10 V$, $V_{GS} = \emptyset V$	f = 1 MHz
Equivalent Noise Voltage	ē _N		5		nV/√HZ	$V_{DS} = 15 \text{V}, I_{D} = 5 \text{mA}$	f = 1 kHz
Differential Gate Source Voltage	V _{GS1} - V _{GS2}	5	20	100	mV	$V_{DG} = 15 \text{V}, I_D = 5 \text{mA}$	

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