

# NJ30 Process

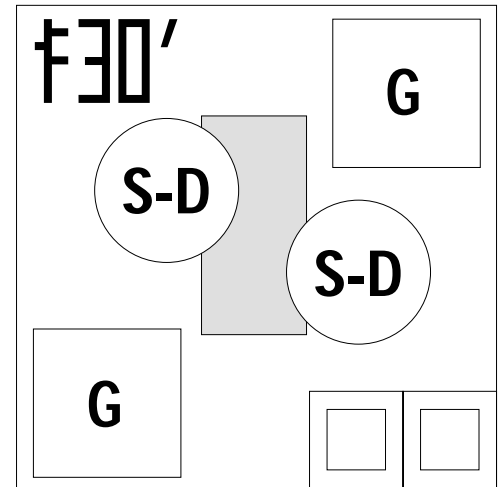
## Silicon Junction Field-Effect Transistor

- Low-Noise, High Gain Amplifier

**Absolute maximum ratings at TA = 25 °C**

Gate Current, I <sub>G</sub>	10 mA
Operating Junction Temperature, T <sub>J</sub>	+150°C
Storage Temperature, T <sub>S</sub>	- 65°C to +175°C

This process available for customer-specified applications.



Die Size = 0.016" X 0.016"  
 All Round Bond Pads = 0.0028"  
 All Square Bond Pads = 0.004"  
 Substrate is also Gate.

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At 25°C free air temperature:

**Static Electrical Characteristics**

		NJ30 Process						
		Min	Typ	Max	Unit	Test Conditions		
Gate Source Breakdown Voltage	V <sub>(BR)GSS</sub>	- 30	- 40		V	I <sub>G</sub> = - 1 μA, V <sub>DS</sub> = 0V		
Reverse Gate Leakage Current	I <sub>GSS</sub>		- 10	- 100	pA	V <sub>GS</sub> = - 20V, V <sub>DS</sub> = 0V		
Drain Saturation Current (Pulsed)	I <sub>DSS</sub>	2		22	mA	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V		
Gate Source Cutoff Voltage	V <sub>GS(OFF)</sub>	- 1		- 5	V	V <sub>DS</sub> = 15V, I <sub>D</sub> = 1 nA		

**Dynamic Electrical Characteristics**

Forward Transconductance	g <sub>fs</sub>		6		mS	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	f = 1 kHz
Input Capacitance	C <sub>iss</sub>		4.3	5	pF	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	f = 1 MHz
Feedback Capacitance	C <sub>rss</sub>		1	1.5	pF	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	f = 1 MHz
Equivalent Noise Voltage	e <sub>N</sub>		4		nV/√HZ	V <sub>DS</sub> = 10V, I <sub>D</sub> = 5 mA	f = 1 kHz