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### **NJ26A Process**

# **Silicon Junction Field-Effect Transistor**

## • Low-Noise, High Gain Amplifier

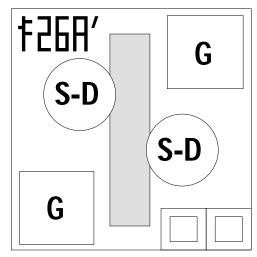
### Absolute maximum ratings at TA = 25°C

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

#### Devices in this Databook based on the NJ26A Process.

#### **Datasheet**

2N4416, 2N4416A



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

At 25°C free air temperature:			NJ26A Process						
Static Electrical Characteristics		Min	Тур	Max	Unit	Test Conditions			
Gate Source Breakdown Voltage	V <sub>(BR)GSS</sub>	- 30	- 40		V	$I_G = -1 \mu A$ , $V_{DS} = \emptyset V$			
Reverse Gate Leakage Current	I <sub>GSS</sub>		- 10	- 100	pА	$V_{GS} = -20 V$ , $V_{DS} = \emptyset V$			
Drain Saturation Current (Pulsed)	I <sub>DSS</sub>	2		22	mA	V <sub>DS</sub> = 15 V, V <sub>GS</sub> = Ø V			
Gate Source Cutoff Voltage	V <sub>GS(OFF)</sub>	- 1		<b>-</b> 5	V	V <sub>DS</sub> = 15 V, I <sub>D</sub> = 1 nA			

#### **Dynamic Electrical Characteristics**

Forward Transconductance	9 <sub>fs</sub>	6		mS	V <sub>DS</sub> = 15 V, V <sub>GS</sub> = Ø V	f = 1 kHz
Input Capacitance	C <sub>iss</sub>	4	4.5	pF	$V_{DS} = 15 V$ , $V_{GS} = \emptyset V$	f = 1 MHz
Feedback Capacitance	C <sub>rss</sub>	1	1.2	pF	$V_{DS} = 15 V$ , $V_{GS} = \emptyset V$	f = 1 MHz
Equivalent Noise Voltage	ē <sub>N</sub>	4		nV/√HZ	$V_{DS} = 10  \text{V},  I_{D} = 5  \text{mA}$	f = 1 kHz

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