

## NJ16 Process

### Silicon Junction Field-Effect Transistor

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

#### 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

#### Devices in this Databook based on the NJ16 Process.

##### Datasheet

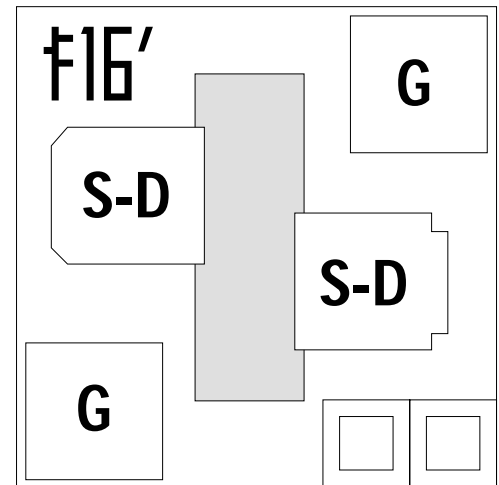
2N3954, 2N3955  
2N3956  
2N3957, 2N3958  
2N4220, 2N4220A  
2N4221, 2N4221A  
2N4338, 2N4339  
2N4340, 2N4341  
2N4867, 2N4867A  
2N4868, 2N4868A  
2N4869, 2N4869A

##### Datasheet

2SK17, 2SK40  
2SK59, 2SK105  
1FN17, 1FN40  
1FN59, 1FN105  
J201, J202  
J203, J204  
J230, J231  
J232  
J500, J501  
J502, J503

##### Datasheet

J504, J505  
J506, J507  
J508, J509  
J510, J511  
J553, J554  
J555, J556  
J557  
U553, U554  
U555, U556  
U557  
VCR4N



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

#### At 25°C free air temperature:

##### Static Electrical Characteristics

		NJ16 Process					
		Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	V <sub>(BR)GSS</sub>	– 50	– 60		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> = – 30V, V <sub>DS</sub> = 0V	
Drain Saturation Current (Pulsed)	I <sub>DSS</sub>	0.2		9	mA	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	
Gate Source Cutoff Voltage	V <sub>GS(OFF)</sub>	– 0.8		– 5.5	V	V <sub>DS</sub> = 15V, I <sub>D</sub> = 1 nA	

##### Dynamic Electrical Characteristics

Forward Transconductance	g <sub>fs</sub>		2.2		mS	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	f = 1 kHz
Input Capacitance	C <sub>iss</sub>		3.5		pF	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	f = 1 MHz
Feedback Capacitance	C <sub>rss</sub>		1.2		pF	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	f = 1 MHz
Equivalent Noise Voltage	e <sub>N</sub>		6		nV/√HZ	V <sub>DS</sub> = 10V, I <sub>D</sub> = 5 mA	f = 1 kHz

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