

**J270, J271****P-Channel Silicon Junction Field-Effect Transistor**

- Analog Switch
- Sample and Hold
- Low Noise, High Gain Amplifier

**Absolute maximum ratings at  $T_A = 25^\circ\text{C}$** 

Reverse Gate Source & Gate Drain Voltage	-30V
Continuous Forward Gate Current	50 mA
Continuous Device Power Dissipation	360 mW
Power Derating	2.8 mW/ $^\circ\text{C}$

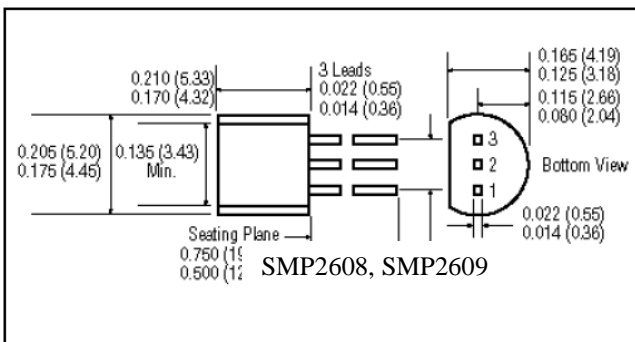
At $25^\circ\text{C}$ free air temperature		J270		J271		Process PJ99	
		Min	Max	Min	Max	Unit	Test Conditions
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	-30		-30		V	$I_G = 1 \mu\text{A}$ , $V_{DS} = 0 \text{ V}$
Gate Reverse Current	$I_{GSS}$		200		200	pA	$V_{GS} = 10 \text{ V}$ , $V_{DS} = 0 \text{ V}$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	0.5	2	1.5	4.5	V	$V_{DS} = -10 \text{ V}$ , $V_{GS} = 0 \text{ V}$
Drain Saturation Current (pulsed)	$I_{DSS}$	-2	-15	-6	-50	mA	$V_{DS} = -10 \text{ V}$ , $V_{GS} = 0 \text{ V}$

**Dynamic Electrical Characteristics**

Common-Source Forward Transconductance	$g_{fs}$	6	15	8	18	mS	$V_{DS} = -10 \text{ V}$ , $V_{GS} = 0 \text{ V}$	f = 1 kHz
Common-Source Input Capacitance	$C_{iss}$		32		32	pF	$V_{DS} = -10 \text{ V}$ , $V_{GS} = 0 \text{ V}$	f = 1 MHz
Common-Source Reverse Transfer Capacitance	$C_{rss}$		4		4	pF	$V_{DS} = -10 \text{ V}$ , $V_{GS} = 0 \text{ V}$	f = 1 MHz

**Typical**

Equivalent Short Circuit Input Noise Voltage	$\sim e_N$	6		6		nV/ $\sqrt{\text{Hz}}$	$V_{DS} = 10 \text{ V}$ , $I_D = 5 \text{ mA}$	f = 1 kHz
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**TO-226AA Package (TO92)**

Dimensions in Inches (mm)

**Pin Configuration**

1 Drain, 2 Gate, 3 Source

**Surface Mount** · SMPJ270, SMPJ271

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