

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°C free air temperature**Static Electrical Characteristics**

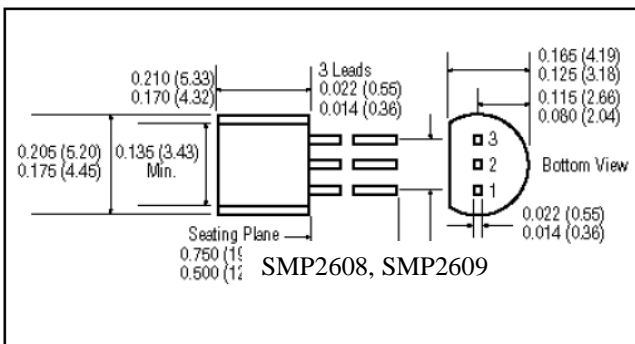
		J270		J271		Process PJ99	
		Min	Max	Min	Max	Unit	Test Conditions
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	-30		-30		V	$I_G = 1 \mu\text{A}$, $V_{DS} = 0 \text{ V}$
Gate Reverse Current	I_{GSS}		200		200	pA	$V_{GS} = 10 \text{ V}$, $V_{DS} = 0 \text{ V}$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	0.5	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	$V_{DS} = -10 \text{ V}$, $V_{GS} = 0 \text{ V}$	$f = 1 \text{ kHz}$
Common-Source Input Capacitance	C_{iss}		32		32	pF	$V_{DS} = -10 \text{ V}$, $V_{GS} = 0 \text{ V}$	$f = 1 \text{ MHz}$
Common-Source Reverse Transfer Capacitance	C_{rss}		4		4	pF	$V_{DS} = -10 \text{ V}$, $V_{GS} = 0 \text{ V}$	$f = 1 \text{ MHz}$

Typical

Equivalent Short Circuit Input Noise Voltage	$\sim e_N$	6		6		nV/ $\sqrt{\text{Hz}}$	$V_{DS} = 10 \text{ V}$, $I_D = 5 \text{ mA}$	$f = 1 \text{ kHz}$
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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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