

J210, J211

N-Channel Silicon Junction Field-Effect Transistor

- Audio Amplifiers
- General Purpose Amplifiers

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

Reverse Gate Source & Reverse Gate Drain Voltage	– 25 V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	360 mW
Power Derating	3.27 mW/°C

At 25°C free air temperature:
Static Electrical Characteristics

		J210			J211			Process NJ26L	
		Min	Typ	Max	Min	Typ	Max	Unit	Test Conditions
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 25			– 25			V	$I_G = -1\mu\text{A}$, $V_{DS} = 0\text{V}$
Gate Reverse Current	I_{GSS}			– 100			– 100	pA	$V_{GS} = -15\text{V}$, $V_{DS} = 0\text{V}$
Gate Operating Current	I_G		– 10			– 10		pA	$V_{DS} = 20\text{V}$, $I_D = 1\text{mA}$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 1		– 3	– 2.5		– 4.5	V	$V_{DS} = 15\text{V}$, $I_D = 1\text{nA}$
Drain Saturation Current (Pulsed)	I_{DSS}	2		15	7		20	mA	$V_{DS} = 15\text{V}$, $V_{GS} = 0\text{V}$

Dynamic Electrical Characteristics

Common Source Forward Transconductance	g_{fs}	4000		12000	6000		12000	μS	$V_{DS} = 15\text{V}$, $V_{GS} = 0\text{V}$	$f = 1\text{kHz}$
Common Source Output Conductance	g_{os}			150			200	μS	$V_{DS} = 15\text{V}$, $V_{GS} = 0\text{V}$	$f = 1\text{kHz}$
Common Source Input Capacitance	C_{iss}		4			4		pF	$V_{DS} = 15\text{V}$, $V_{GS} = 0\text{V}$	$f = 1\text{MHz}$
Common Source Reverse Transfer Capacitance	C_{rss}		1			1		pF	$V_{DS} = 15\text{V}$, $V_{GS} = 0\text{V}$	$f = 1\text{MHz}$
Equivalent Short Circuit Input Noise Voltage	$\bar{e}_N$		10			10		nV/ $\sqrt{\text{Hz}}$	$V_{DS} = 15\text{V}$, $V_{GS} = 0\text{V}$	$f = 1\text{kHz}$

TO-226AA Package

Dimensions in Inches (mm)

Pin Configuration

1 Drain, 2 Source, 3 Gate

Surface Mount

SMPJ210, SMPJ211



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