

N-Channel Silicon Junction Field-Effect Transistor

- Audio Amplifier
- General Purpose Amplifier

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

		J212			Process NJ26L	
		Min	Typ	Max	Unit	Test Conditions
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	- 25			V	$I_G = -1 \mu\text{A}, V_{DS} = 0\text{V}$
Gate Reverse Current	I_{GSS}			- 100	pA	$V_{GS} = -15\text{V}, V_{DS} = 0\text{V}$
Gate Operating Current	I_G		- 10		pA	$V_{DS} = 20\text{V}, I_D = 1\text{mA}$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	- 4		- 6	V	$V_{DS} = 15\text{V}, I_D = 1\text{nA}$
Drain Saturation Current (Pulsed)	I_{DSS}	15		40	mA	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}$

Dynamic Electrical Characteristics

Common Source Forward Transconductance	g_{fs}	7000		12000	μS	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{kHz}$
Common Source Output Conductance	g_{os}			200	μS	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{kHz}$
Common Source Input Capacitance	C_{iss}		4		pF	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{MHz}$
Common Source Reverse Transfer Capacitance	C_{rss}		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		nV/√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

SMPJ212

