

## J201, J202

## 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	- 40 V
Continuous Forward Gate Current	50 mA
Continuous Device Power Dissipation	360 mW
Power Derating	3.27 mW/°C

## At 25°C free air temperature:

## Static Electrical Characteristics

		J201			J202			Process NJ16	
		Min	Typ	Max	Min	Typ	Max	Unit	Test Conditions
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	- 40			- 40			V	$I_G = -1\mu\text{A}, V_{DS} = 0\text{V}$
Gate Reverse Current	$I_{GSS}$			- 100			- 100	pA	$V_{GS} = -20\text{V}, V_{DS} = 0\text{V}$
Gate Operating Current	$I_G$		- 10			- 10		pA	$V_{DG} = 20\text{V}, I_D = I_{DSS(\text{min})}$
Gate Source Cutoff Voltage	$V_{GS(\text{OFF})}$	- 0.3		- 1.5	- 0.8		- 4	V	$V_{DS} = 20\text{V}, I_D = 10\text{ nA}$
Drain Saturation Current (Pulsed)	$I_{DSS}$	0.2		1	0.9		4.5	mA	$V_{DSS} = 15\text{V}, V_{GS} = 0\text{V}$

## Dynamic Electrical Characteristics

Common Source Forward Transconductance	$g_{fs}$	500			1000			$\mu\text{S}$	$V_{DS} = 20\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{ kHz}$
Common Source Output Conductance	$g_{os}$		1			3.5		$\mu\text{S}$	$V_{DS} = 20\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{ kHz}$
Common Source Input Capacitance	$C_{iss}$		4			4		pF	$V_{DS} = 20\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{ MHz}$
Common Source Reverse Transfer Capacitance	$C_{rss}$		1			1		pF	$V_{DS} = 20\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{ MHz}$
Equivalent Short Circuit Input Noise Voltage	$e_N$		5			5		nV/√Hz	$V_{DS} = 10\text{V}, V_{GS} = 0\text{V}$	$f = 1\text{ kHz}$

## TO-226AA Package

Dimensions in Inches (mm)

## Pin Configuration

1 Drain, 2 Source, 3 Gate

## Surface Mount

SMPJ201, SMPJ202



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