J230, J231

N-Channel Silicon Junction Field-Effect Transistor

- Audio Amplifiers

Absolute maximum ratings at T_A = 25°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		J230			J231			Process NJ16		
		Min	Typ	Max	Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 40			– 40			V	I_G = – 1µA, V_{DS} = ØV	
Gate Reverse Current	I_{GSS}			– 250			– 250	pA	V_{GS} = – 30V, V_{DS} = ØV	
Gate Operating Current	I_G		– 2			– 2		pA	V_{DS} = 20V, I_D = ØV	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.5		– 3	– 1.5		– 5	V	V_{DS} = 20V, I_D = 1 µA	
Drain Saturation Current (Pulsed)	I_{DSS}	0.7		3	2		6	mA	V_{DS} = 20V, V_{GS} = ØV	
Dynamic Electrical Characteristics										
Common Source Forward Transconductance	g_{fs}	1000		3500	1500		4000	µS	V_{DS} = 20V, V_{GS} = ØV	f = 1 kHz
Common Source Output Conductance	g_{os}		1.5			3		µS	V_{DS} = 20V, V_{GS} = ØV	f = 1 kHz
Common Source Input Capacitance	C_{iss}		4			4		pF	V_{DS} = 20V, V_{GS} = ØV	f = 1 MHz
Common Source Reverse Transfer Capacitance	C_{rss}		1			1		pF	V_{DS} = 20V, V_{GS} = ØV	f = 1 MHz
Equivalent Short Circuit Input Noise Voltage	$\bar{e}_N$		8	30		8	30	nV/√Hz	V_{DS} = 10V, V_{GS} = ØV	f = 10 Hz
			2			2		nV/√Hz	V_{DS} = 10V, V_{GS} = ØV	f = 1 kHz

TO-226AA Package
Dimensions in Inches (mm)

Pin Configuration
1 Drain, 2 Source, 3 Gate

Surface Mount
SMPJ230, SMPJ231

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