



UJD2201

JFET

P-CHANNEL MOS FIELD EFFECT TRANSISTOR

DESCRIPTION

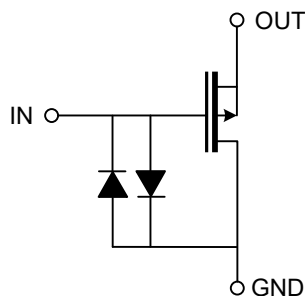
The UTC **UJD2201** is a P-channel MOSFET for Impedance converter of microphone.

The UTC **UJD2201** is the most suitable for the ECM especially which requires high SNR.

FEATURES

- * Supply Voltage: +1.0 to +10V at $R_L=15K\Omega$
- * Low Consumption Current: $85\mu A$ typ.
- * Voltage Gain: -4dB typ. at $C_{IN}=3pF$
- * Low Output Noise: -115dBV typ.
- * Total Harmonic Distortion: 0.1% typ.

EQUIVALENT CIRCUIT



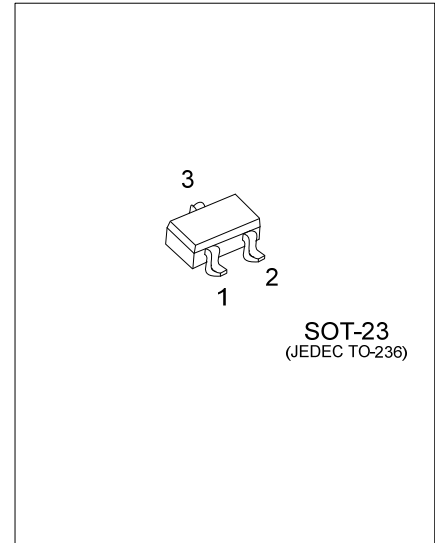
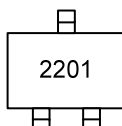
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UJD2201L-AE3-R	UJD2201G-AE3-R	SOT-23	O	G	I	Tape Reel

Note: Pin Assignment: D: Drain S: Source G: Gate

UJD2201G-AE3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AE3: SOT-23
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage (IN-GND)	V_{IN}	-0.8 ~ +0.8	V
Input Current (GND-IN)	I_{IN}	0.5	mA
Output Voltage (IN-GND)	V_{OUT}	-0.5 ~ +6	V
Output Current (GND-IN)	I_{OUT}	17	mA
Allowable Power Dissipation	P_D	100	mW
Operating Temperature	T_{OPR}	-40 ~ +105	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-40 ~ +125	$^{\circ}\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V_{DD}	$R_L=15\text{k}\Omega$	1	2	10	V

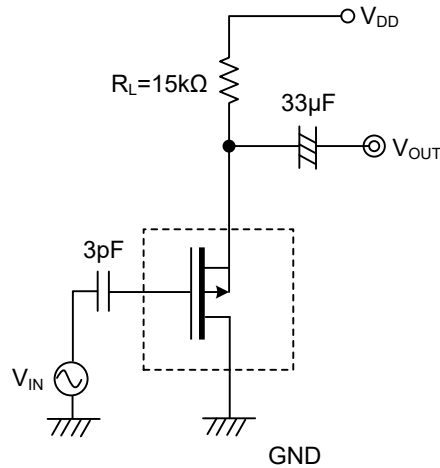
■ ELECTRICAL CHARACTERISTICS

($V_{DD}=2\text{V}$, $C_{IN}=3\text{pF}$, $R_L=15\text{k}\Omega$, $f=1\text{kHz}$, $V_{IN}=10\text{mV}$, $T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Consumption Current	I_{DD}	$V_{IN}=0\text{V}$, $C_{IN}=\text{none}$	60	85	105	μA
Input Capacitance	C_{ISS}	$f=1\text{MHz}$, $C_{IN}=\text{none}$		1.5		pF
Voltage Gain	G_V		-5.5	-4.0		dB
Reduced Voltage Characteristics	$\Delta G_{V(V)}$	$V_{DD}=2 \sim 1.5\text{V}$		0.3		dB
Frequency Characteristics	$\Delta G_{V(f)}$	$f=1\text{kHz to } 110\text{Hz}$		0.05		dB
Output Noise Voltage	N_V	$V_{IN}=0\text{Vrms}$, A-weight		-115		dB
Total Harmonic Distortion	THD	$V_{OUT}=30\text{mVrms}$		0.1		%

■ TEST CIRCUITS

Voltage Gain
Reduced Voltage Characteristics
Frequency Characteristics
Output Noise Voltage
Total Harmonic Distortion



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