

UTCK1109 JUNCTION FIELD EFFECT TRANSISTOR

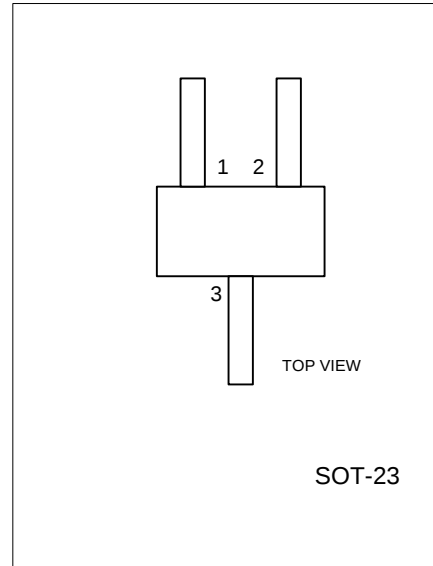
N-CHANNEL JFET FOR ELECTRET CONDENSER MICROPHONE

DESCRIPTION

The UTC K1109 is N-channel JFET for electret condenser microphone.

FEATURES

- *High g_m implies low transfer loss
- *Built-in gate-source diode and resistor implies fast power on settling time



1:SOURCE 2:DRAIN 3:GATE

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	V_{DSX}	20	V
Gate-Drain Voltage	V_{GDO}	-20	V
Drain Current	I_D	10	mA
Gate Current	I_G	10	mA
Total Power Dissipation	P_T	80	mW
Junction Temperature	T_j	125	°C
Storage Temperature	T_{STG}	-55 ~ +125	°C

ELECTRICAL CHARACTERISTICS($T_j=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Drain Current	I_{DSS}	$V_{DS}=5.0\text{V}, V_{GS}=0$	40		600	μA
Gate Off Voltage	$V_{GS(OFF)}$	$V_{DS}=5.0\text{V}, I_D=1.0\mu\text{A}$	-0.1		-0.1	V
Forward Transfer Admittance	$ Y_{FS1} $	$V_{DS}=5.0\text{V}, I_D=30\mu\text{A}, f=1\text{kHz}$	350	480		μS
Forward Transfer Admittance	$ Y_{FS2} $	$V_{DS}=5.0\text{V}, V_{GS}=0, f=1\text{kHz}$	350	1600		μS
Input Capacitance	C_{iss}	$V_{DS}=5.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		7.0	8.0	pF
Noise Voltage	NV			1.8	3.0	V

CLASSIFICATION OF I_{DSS}

RANK	J34	J35	J36
RANGE	90-180	150-300	200-450

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NOISE VOLTAGE TEST CIRCUIT

