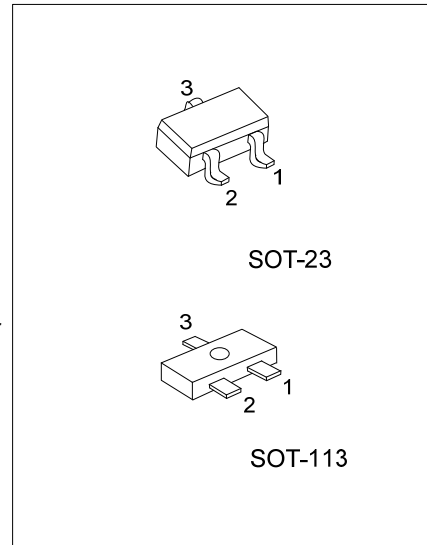




K1109

N-CHANNEL JFET

N-CHANNEL JFET FOR ELECTRET CONDENSER MICROPHONE



DESCRIPTION

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

FEATURES

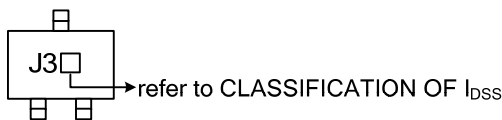
- * High GM Implies Low Transfer loss
- * Built-In Gate-Source Diode and Resistor Implies Fast Power on Settling Time

ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
K1109-x-AC3-R	K1109L-x-AC3-R	K1109G-x-AC3-R	SOT-113	S	D	G	Tape Reel
K1109-x-AE3-R	K1109L-x-AE3-R	K1109G-x-AE3-R	SOT-23	S	D	G	Tape Reel

<p>K1109L-x-AC3-R</p>	<p>(1) R: Tape Reel</p> <p>(2) AC3: SOT-113, AE3: SOT-23</p> <p>(3) x: refer to CLASSIFICATION OF I_{DSS}</p> <p>(4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	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_D	80	mW
Junction Temperature	T_J	+125	°C
Storage Temperature	T_{STG}	-55 ~ +125	°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.

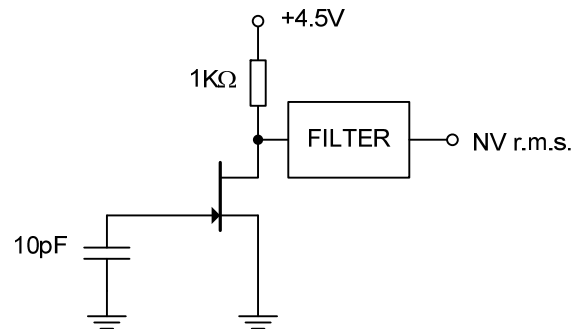
■ ELECTRICAL CHARACTERISTICS ($T_J=25^\circ\text{C}$, unless otherwise specified)

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		-1.0	V
Forward Transfer Admittance	Y_{FSI}	$V_{DS}=5.0\text{V}, V_{GS}=0, f=1\text{kHz}$	600	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	J32	J33	J34	J35	J36	J37
RANGE	40-70	60-110	90-180	150-300	200-450	300-600

■ TEST CIRCUIT



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