



## K1109

## N-CHANNEL JFET

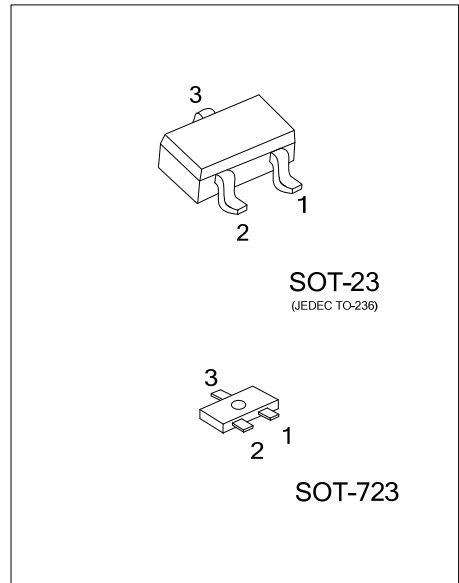
### N-CHANNEL JFET FOR ELECTRET CONDENSER MICROPHONE

#### 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



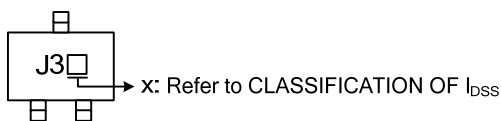
#### ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
K1109G-x-AE3-R	SOT-23	S	D	G	Tape Reel
K1109G-x-AQ3-R	SOT-723	S	D	G	Tape Reel

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

<p>K1109G-x-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AQ3: SOT-723 (3) x: refer to CLASSIFICATION OF <math>I_{BSS}</math> (4) G: Halogen Free and Lead Free</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
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.

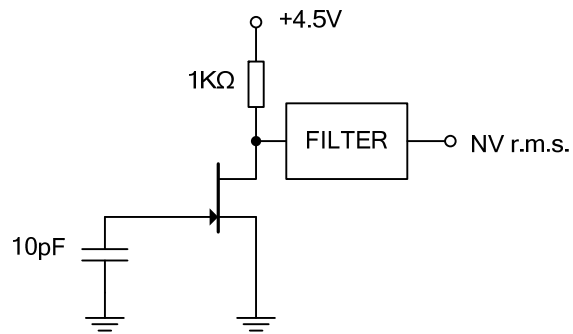
■ ELECTRICAL CHARACTERISTICS ( $T_J=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Drain Current	$I_{DSS}$	$V_{DS}=2.0\text{V}, V_{GS}=0$	40		600	$\mu\text{A}$
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		$\mu\text{S}$
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	$\mu\text{V}$

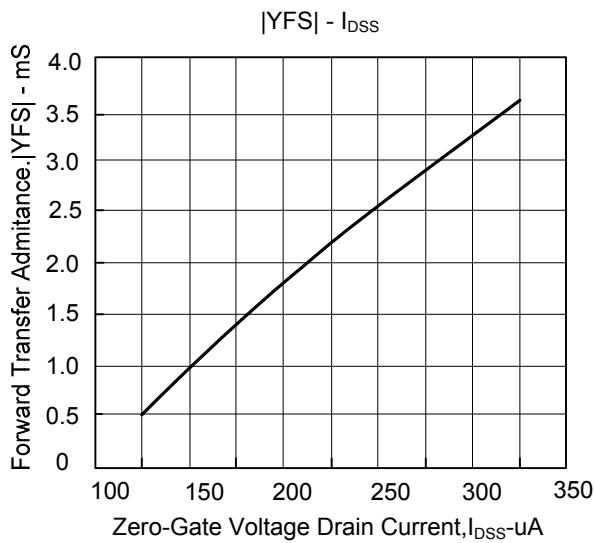
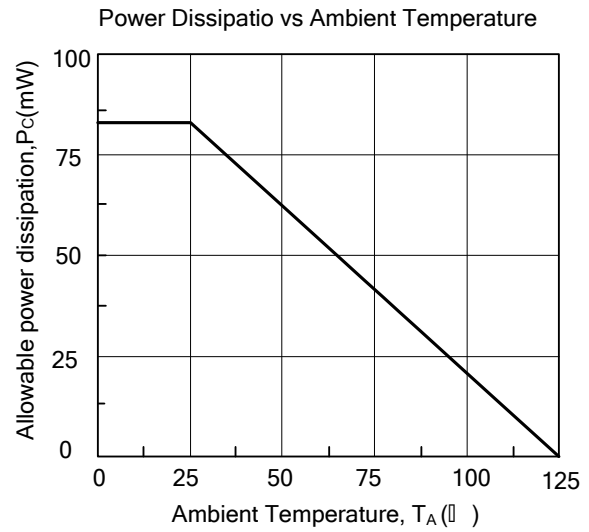
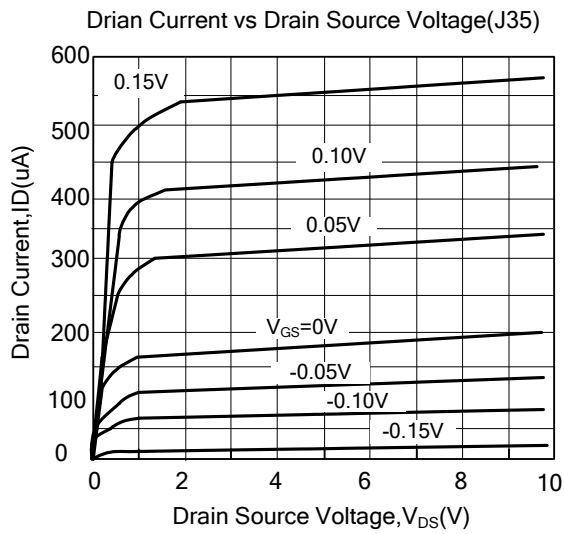
■ CLASSIFICATION OF  $I_{DSS}$

RANK	J32	J33	J34	J35	J36	J37
RANGE	40-70	60-110	90-180	150-300	200-450	300-600

## ■ TEST CIRCUIT



## TYPICAL CHARACTERISTICS



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