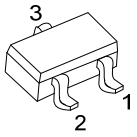
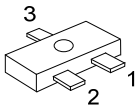
K1109

N-CHANNEL JFET

N-CHANNEL JFET FOR ELECTRET CONDENSER MICROPHONE



SOT-23



SOT-113

■ 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

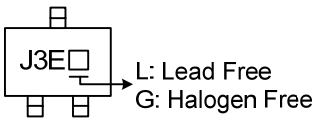
Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
K1109-x-AC3-R	K1109L-x-AC3-R	K1109G-x-AC3-R	SOT-113	S	D	G	Tape Reel
K1109-x-AE3-R	K1109L-x-AE3-R	K1109G-x-AE3-R	SOT-23	S	D	G	Tape Reel

K1109L-x-AC3-R

(1)Packing Type
(2)Package Type
(3)Rank
(4)Lead Plating

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

■ 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°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Drain Current	I_{DSS}	V_{DS}=5.0V, V_{GS}=0	40		600	μA
Gate Off Voltage	$V_{GS(OFF)}$	V_{DS}=5.0V, I_D=1.0μA	-0.1		-1.0	V
Forward Transfer Admittance	|YFS|	V_{DS}=5.0V, V_{GS}=0, f=1kHz	600	1600		μS
Input Capacitance	C_{ISS}	V_{DS}=5.0V, V_{GS}=0, f=1.0MHz		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