



2SK1413

Preliminary

N-CHANNEL JFET

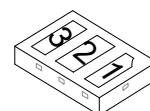
MICROPHONE SPECIFIC FIELD-EFFECT TRANSISTOR SPECIFICATION

DESCRIPTION

The UTC **2SK1413** is suitable of Impedance converter of ECM.

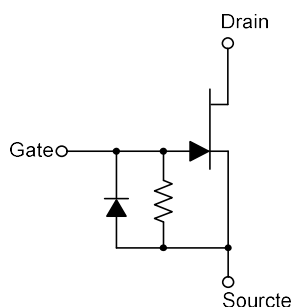
FEATURES

- * Excellent forward transfer admittance $I_{dss}=0.3\text{mA}/1.7\text{ms}$
- * Excellent frequency character
- * Low Noise



X2DFN1208-3

EQUIVALENT CIRCUIT



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SK1413G-x-KBC-R	2SK1413G-x-KBC-R	X2DFN1208-3	D	G	S	Tape Reel

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

2SK1413G-x-KBC-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) KBC: X2DFN1208-3
	(3)Rank	(3) x: refer to CLASSIFICATION OF I_{DSS}
	(4)Green Package	(4) G: Halogen Free and Lead Free, L: Lead Free

MARKING



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

PARAMETER	SYMBOL	RATING	UNIT
Drain to Source Voltage	V_{DSX}	35	V
Gate to Drain Voltage	V_{GDO}	-35	V
Maximum Allowable Drain Current	I_D	10	mA
Maximum Allowable Gate Current	I_G	1	mA
Power Dissipation	P_D	100	mW
Junction Temperature	T_J	+125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +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.

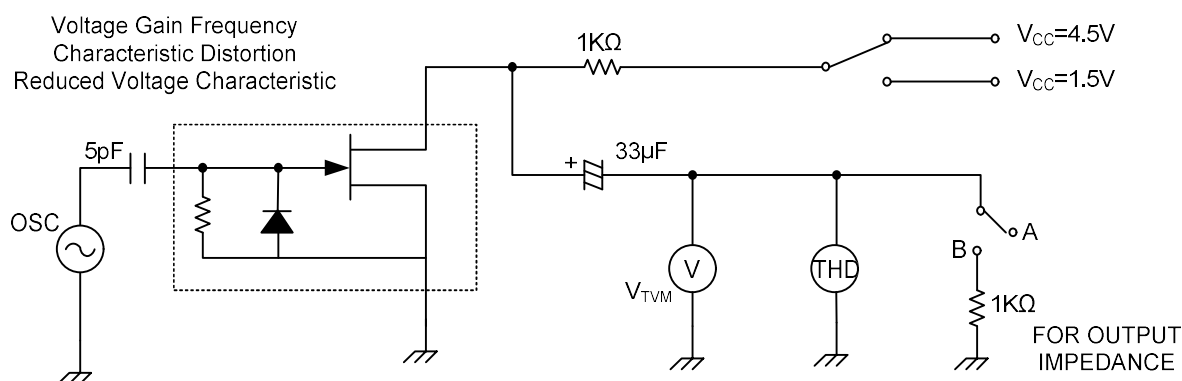
■ **ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS}=5\text{V}$, $I_D=1\mu\text{A}$	-0.2		-0.6	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=2\text{V}$, $V_{GS}=0\text{V}$	0.15	0.3	0.45	mA
Forward Transfer Admittance	Y_{fs}	$V_{DS}=5\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{kHz}$	1.4	1.6	1.8	mS
Voltage Gain	G_V	$V_{IN}=10\text{mV}$, $f=1\text{kHz}$	-0.6		-3.0	dB
Reduced Voltage Character	ΔG_V	$V_{IN}=10\text{mV}$, $V_{CC}=5\text{--}1.5\text{V}$, $f=1\text{kHz}$			-3.5	dB
Frequency Characteristic	$\Delta G_V(f)$	$f=1\text{kHz} \sim 110\text{Hz}$			-1.0	dB

■ **CLASSIFICATION OF I_{DSS}**

RANK	A	B	C	D
RANGE (μA)	150 ~ 250	210 ~ 280	240 ~ 360	330 ~ 450

■ TEST CIRCUIT



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