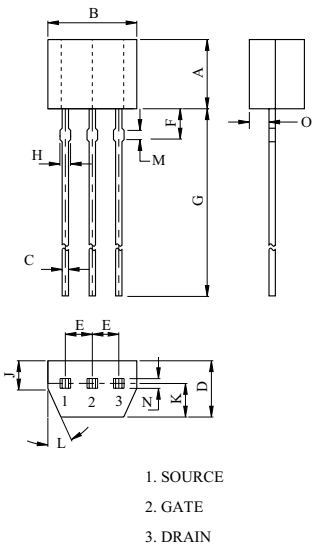
KTK596

N CHANNEL JUNCTION FIELD EFFECT TRANSISTOR

CONDENSER MICROPHONE APPLICATION.

FEATURES

- Expecially Suited for Use in Audio, Telephone.
- Capacitor Microphones.
- Excellent Voltage Characteristics.
- Excellent Transient Characteristics.



DIM	MILLIMETERS
A	3.20 MAX
B	4.30 MAX
C	0.55 MAX
D	2.40±0.15
E	1.27
F	2.30
G	14.00±0.50
H	0.60 MAX
J	1.05
K	1.45
L	25°
M	0.80
N	0.55 MAX
O	0.75

TO-92M

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDO}	-20	V
Gate Current	I_G	10	mA
Drain Current	I_D	1	mA
Drain Power Dissipation	P_D	400	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate-Drain Breakdown Voltage	$V_{(BR)GDO}$	I_G=-100μA	-20	-	-	V
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	V_{DS}=5V, I_D=1μA	-	-0.6	-1.5	V
Drain Current	I_{DSS} (Note)	V_{DS}=5V, V_{GS}=0	100	-	480	μA
Foward Transfer Admittance	$\lvert y_{fs} \rvert$	V_{DS}=5V, V_{GS}=0, f=1kHz	0.4	1.2	-	mS
Input Capacitance	C_{iss}	V_{DS}=5V, V_{GS}=0, f=1MHz	-	3.5	-	pF
Reverse Transfer Capacitance	C_{rss}	V_{DS}=5V, V_{GS}=0, f=1MHz	-	0.65	-	pF

Note : I_{DSS} Classification A:100 ~ 170, B:150 ~ 240, C:210 ~ 350, C1:210~310, C2:290~350, D:320 ~ 480

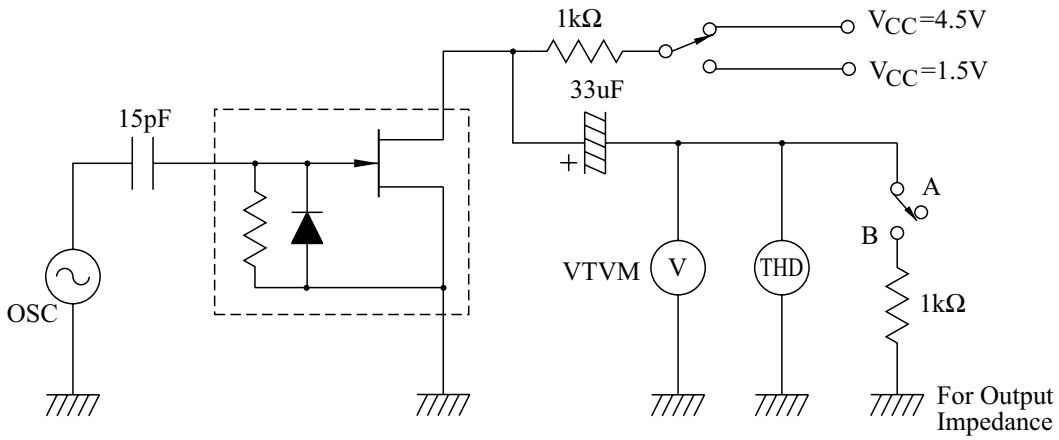
ELECTRICAL CHARACTERISTICS

(Ta=25℃, V_{CC}=4.5V, R_L=1kΩ, C_{in}=15pF, See Specified Test Circuit.)

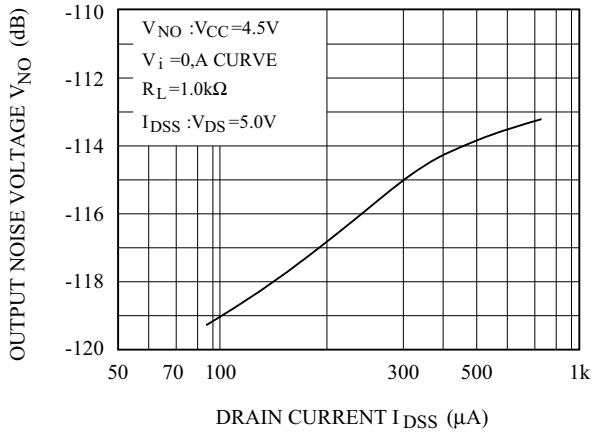
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Voltage Gain	G_V	V_{in}=10mV, f=1kHz	-	-3.0	-	dB
Reduced Voltage Characteristic	ΔG_{VV}	V_{in}=10mV, f=1kHz V_{CC}=4.5V→1.5V	-	-1.2	-4.0	dB
Frequency Characteristic	ΔG_{VF}	f=1kHz ~110Hz	-	-	-1.0	dB
Input Resistance	Z_{in}	f=1kHz	25	-	-	MΩ
Output Resistance	Z_O	f=1kHz	-	-	700	Ω
Total Harmonic Distortion	THD	V_{in}=30mV, f=1kHz	-	1.0		%
Output Noise Voltage	V_{NO}	V_{in}=0, A curve	-	-	-110	dB

SPECIFIED TEST CIRCUIT

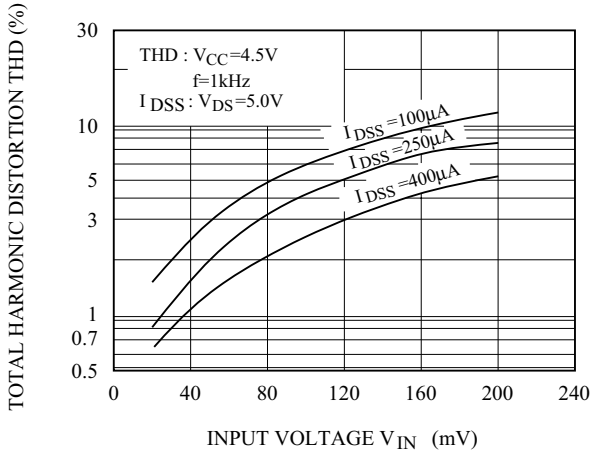
· Voltage gain.
· Frequency Characteristic.
· Distortion.
· Reduced Voltage Characteristic.



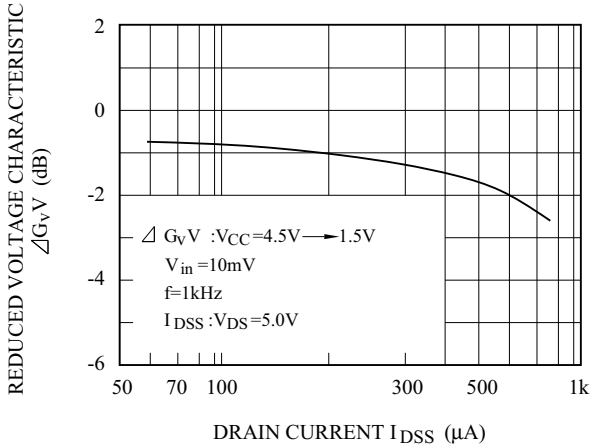
V_{NO} - I_{DSS}



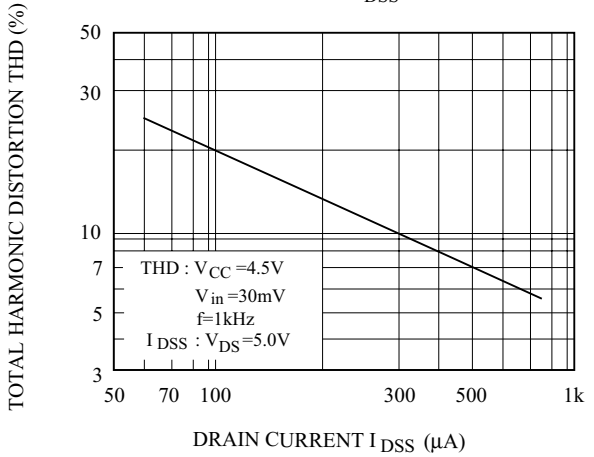
THD - V_{IN}



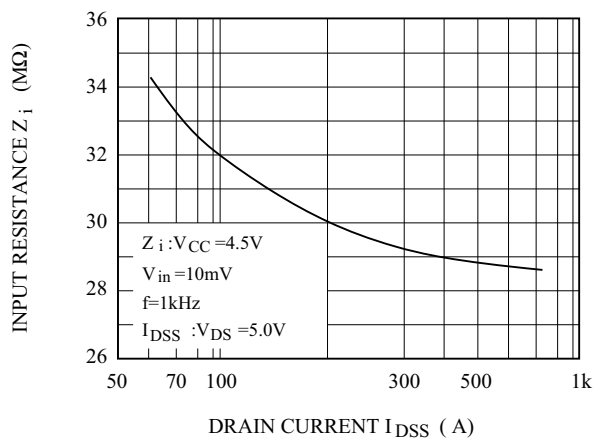
ΔG_vV - I_{DSS}



THD - I_{DSS}



Z_i - I_{DSS}



Z_o - I_{DSS}