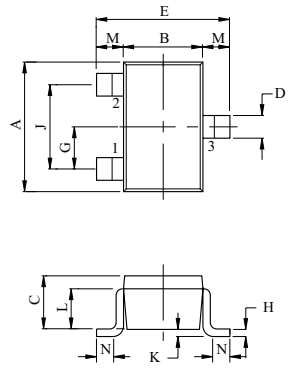
KTK597

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	2.00±0.20
B	1.25±0.15
C	0.90±0.10
D	0.3+0.10/-0.05
E	2.10± 0.20
G	0.65
H	0.15+0.1/-0.06
J	1.30
K	0.00-0.10
L	0.70
M	0.42±0.10
N	0.10 MIN

1. SOURCE
2. DRAIN
3. GATE

USM

MAXIMUM RATING (Ta=25℃)

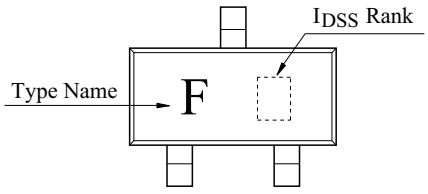
CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDO}	-20	V
Gate Current	I_G	10	mA
Drain Current	I_D	1	mA
Drain Power Dissipation	P_D	100	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~150	℃

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	150	-	320	μA
Foward Transfer Admittance	$\|y_{fs}\|$	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 Y(1):150~240, GR(2):210~320

Marking



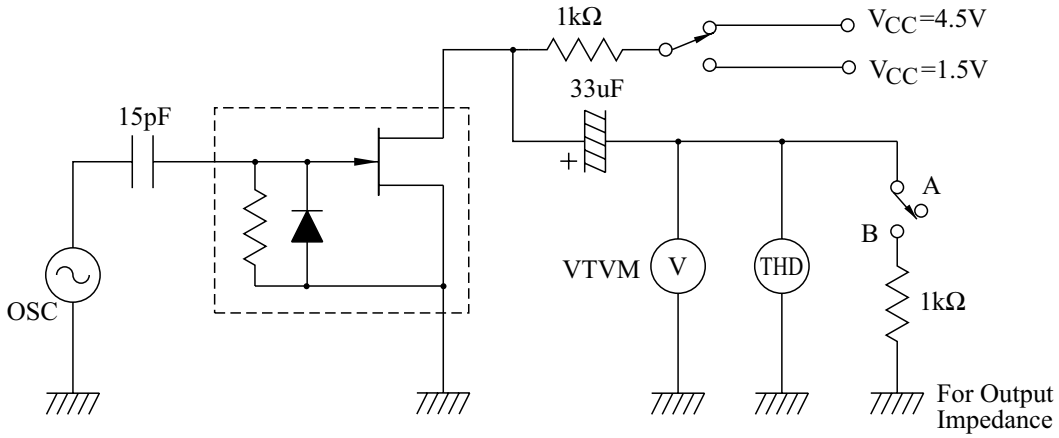
ELECTRICAL CHARACTERISTICS

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

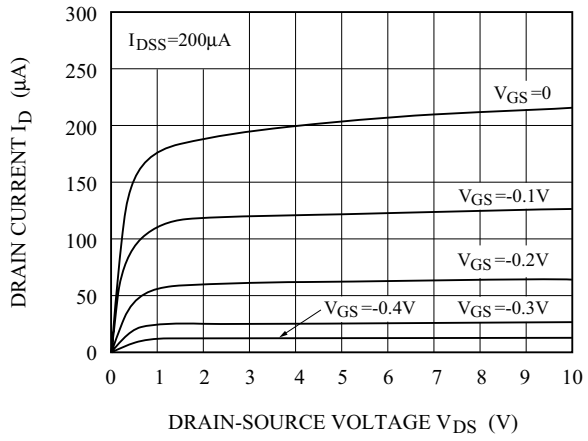
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Voltage Gain	G_V	V_{in}=10mV, f=1kHz	-	-3.0	-	dB
Reduced Voltage Characteristic	ΔG_{VV}	V_{in}=10mV, f=1kHz V_{CC}=4.5V→1.5V	-	-1.2	-4.0	dB
Frequency Characteristic	ΔG_{VF}	f=1kHz ~110Hz	-	-	-1.0	dB
Input Resistance	Z_{in}	f=1kHz	25	-	-	MΩ
Output 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

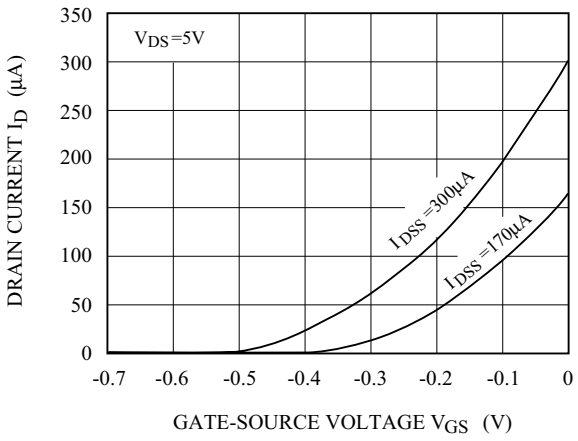
· Voltage gain.
· Frequency Characteristic.
· Distortion.
· Reduced Voltage Characteristic.



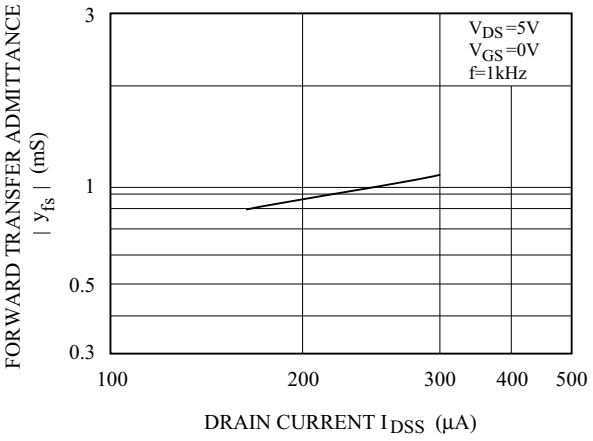
I_D - V_{DS}



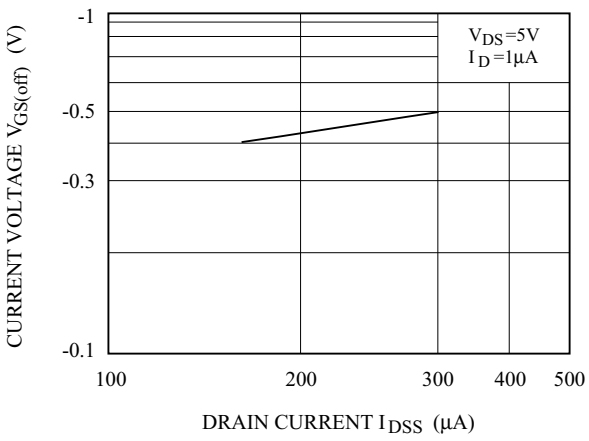
I_D - V_{GS}



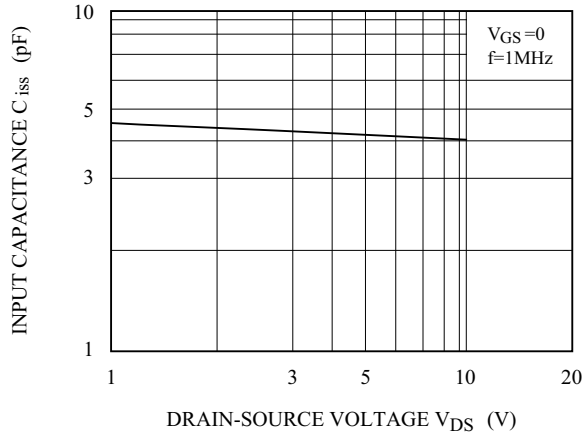
$|y_{fs}|$ - I_{DSS}



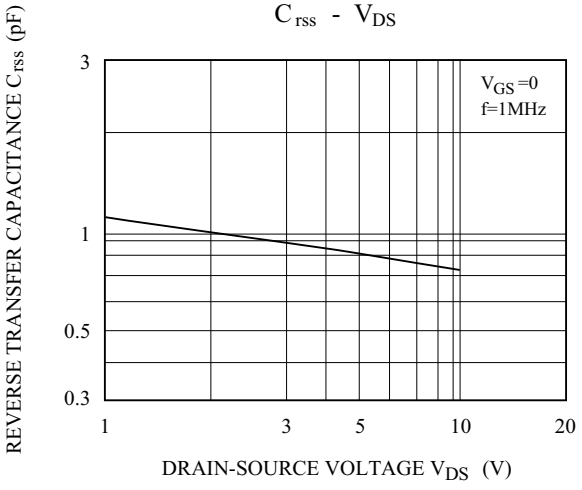
$V_{GS(off)}$ - I_{DSS}



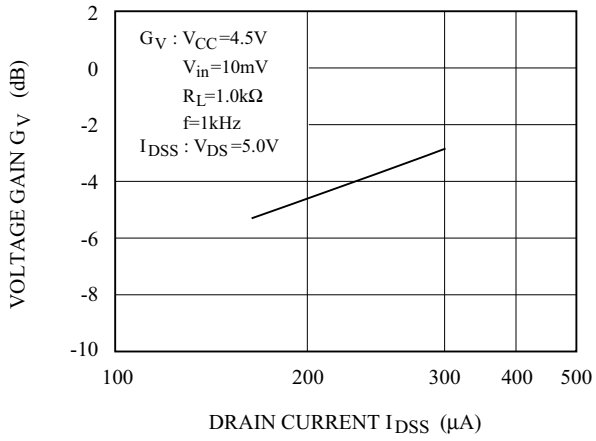
C_{iss} - V_{DS}



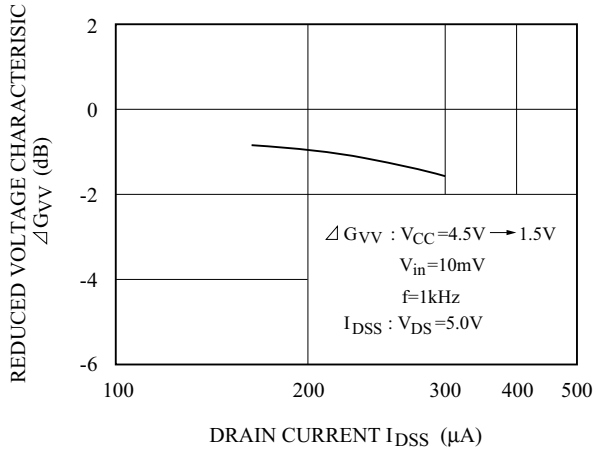
C_{rss} - V_{DS}



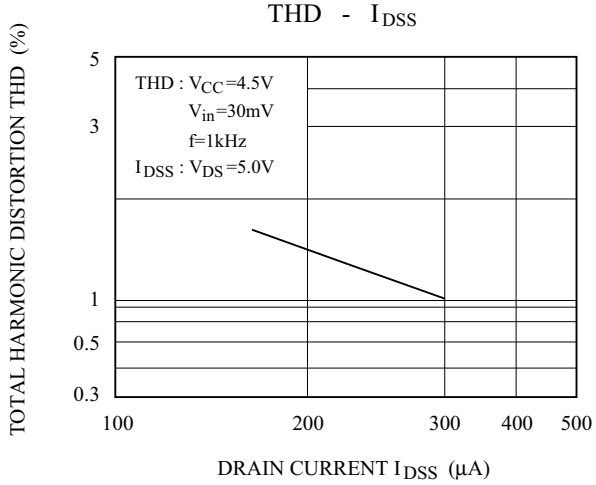
G_V - I_{DSS}



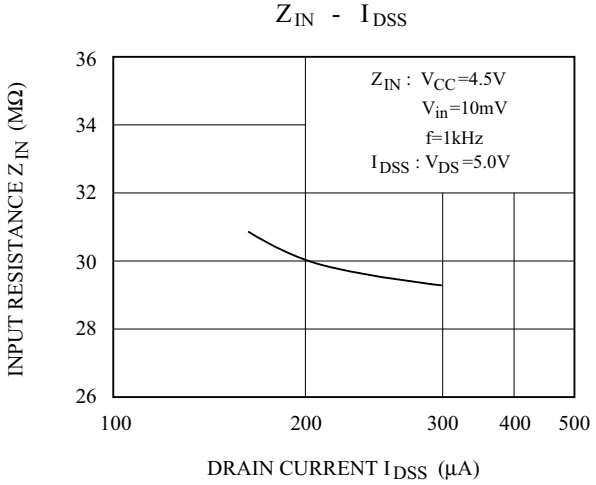
ΔG_{VV} - I_{DSS}



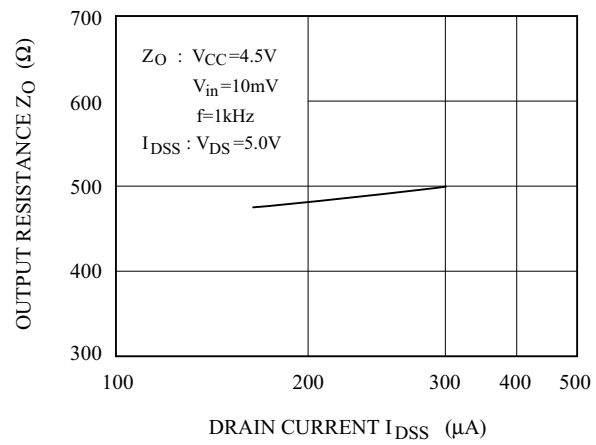
THD - I_{DSS}



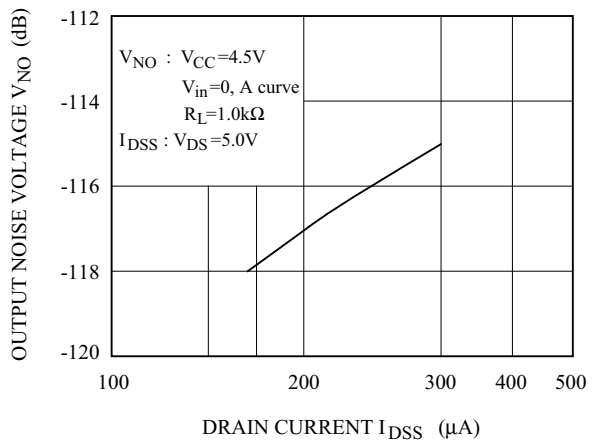
Z_{IN} - I_{DSS}



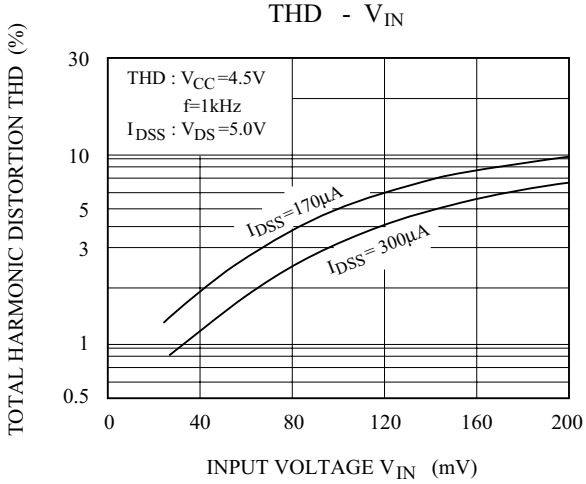
Z_O - I_{DSS}



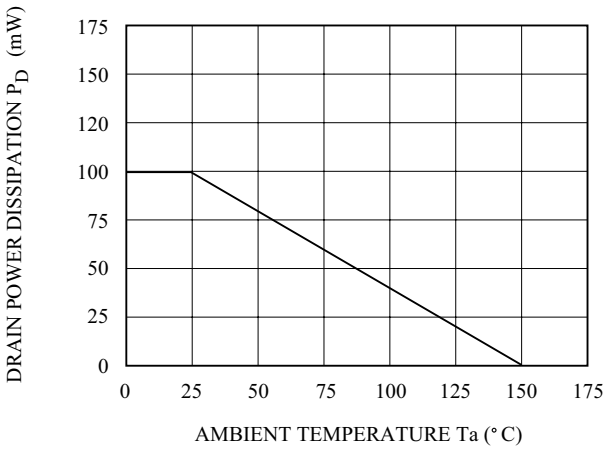
V_{NO} - I_{DSS}



THD - V_{IN}


TOTAL HARMONIC DISTORTION THD (%)
30
10
5
3
1
0.5
THD : V_{CC}=4.5V
f=1kHz
I_{DSS} : V_{DS}=5.0V
I_{DSS}=170μA
I_{DSS}= 300μA
0
40
80
120
160
200
INPUT VOLTAGE V_{IN} (mV)

P_D - Ta


DRAIN POWER DISSIPATION P_D (mW)
175
150
120
100
75
50
25
0
0
25
50
75
100
125
150
175
AMBIENT TEMPERATURE Ta (°C)