查询KTK597供应商 捷多邦，专业PCB打样工厂，24小时加急出货

KEC

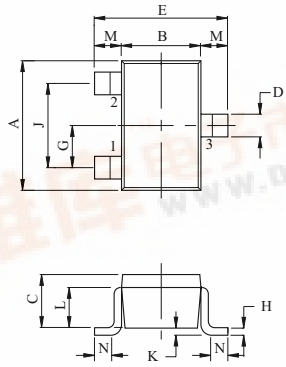
SEMICONDUCTOR
TECHNICAL DATA

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℃)

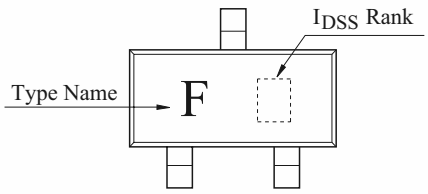
CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDO}	-20	V
Gate Current	I_G	10	mA
Drain Current	I_D	1	mA
Drain Power Dissipation	P_D	100	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~150	℃

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	$\lvert y_{fs} \rvert$	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 Y(1):150~240, GR(2):210~320

Marking



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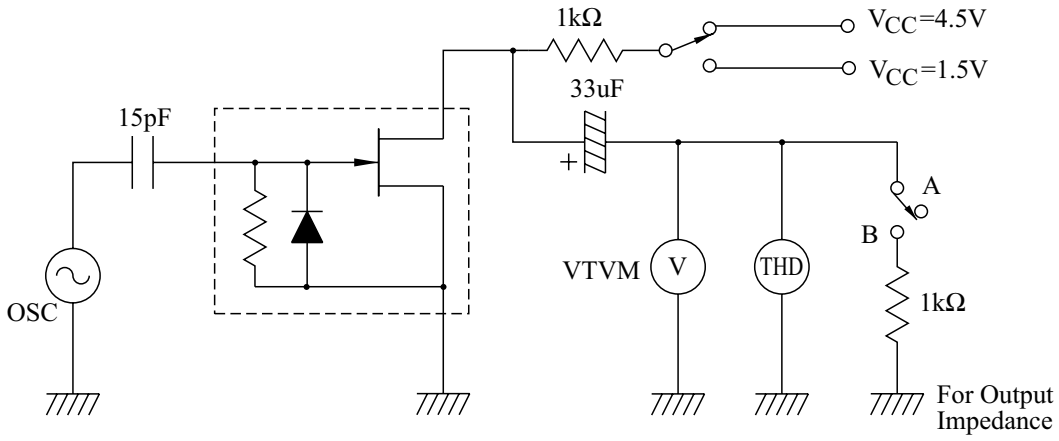
ELECTRICAL CHARACTERISTICS

(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.



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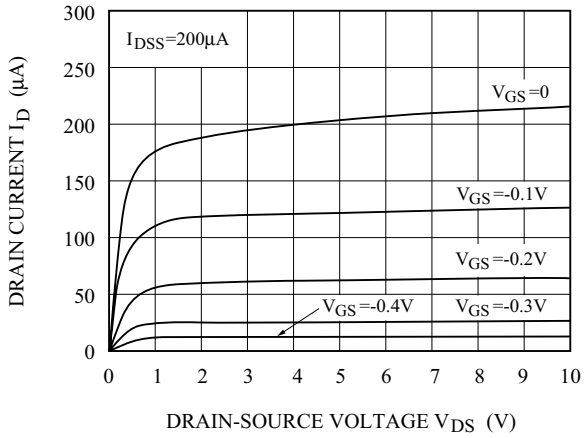
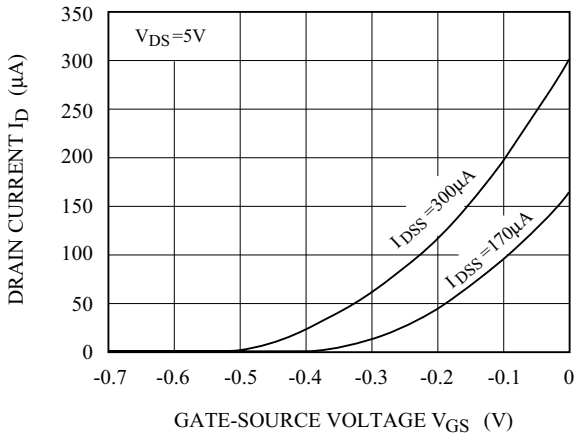
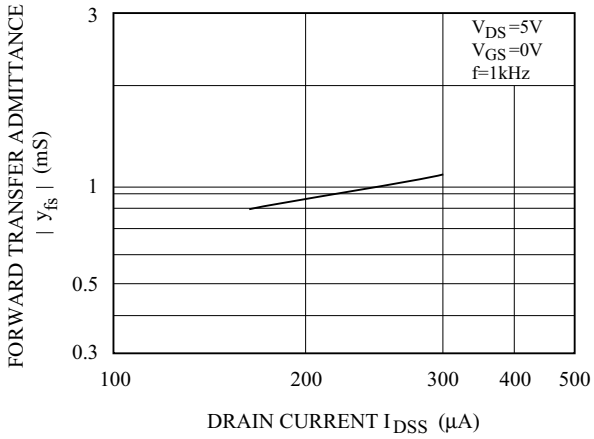
I_D - V_{DS}



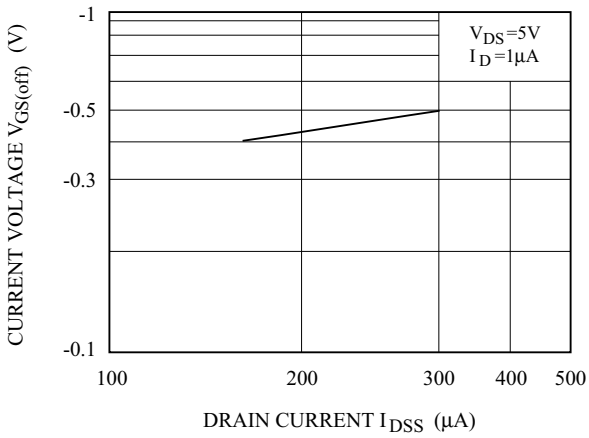
I_D - V_{GS}



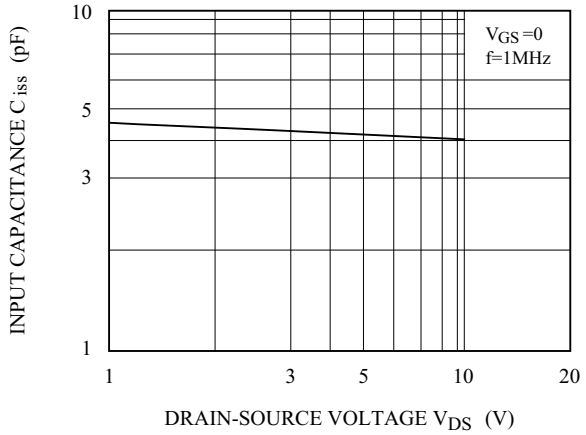
$|y_{fs}|$ - I_{DSS}



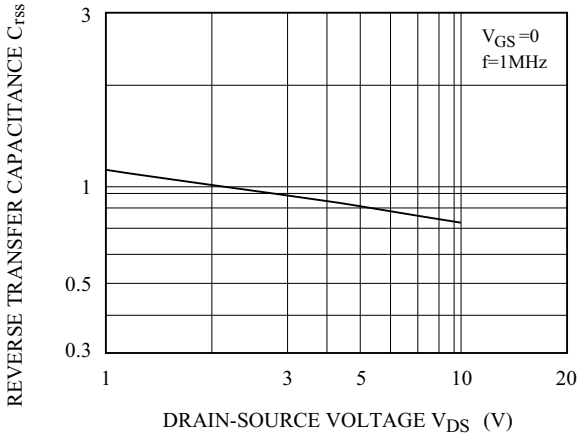
$V_{GS(off)}$ - I_{DSS}



C_{iss} - V_{DS}



C_{rss} - V_{DS}



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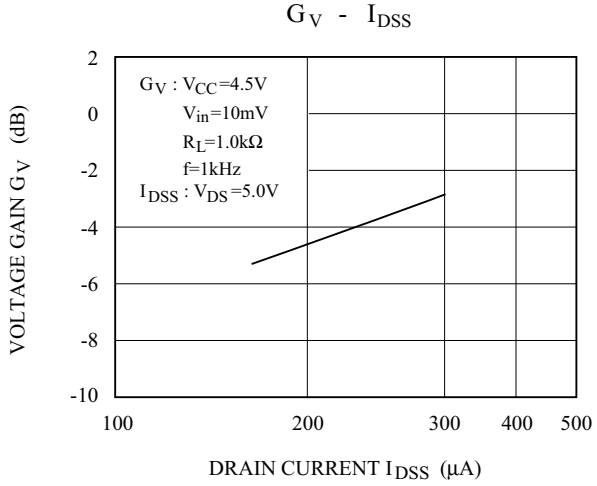
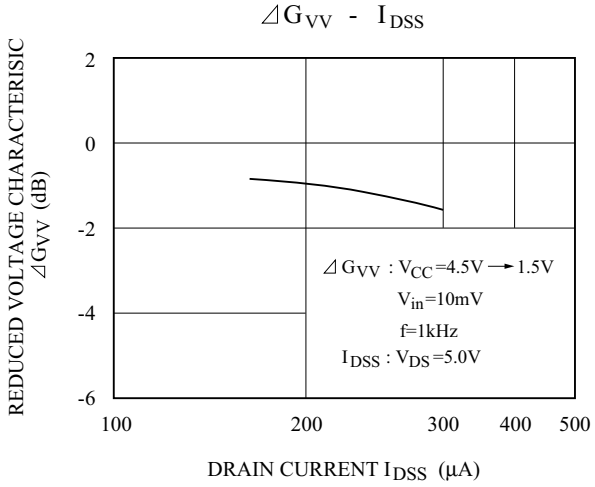
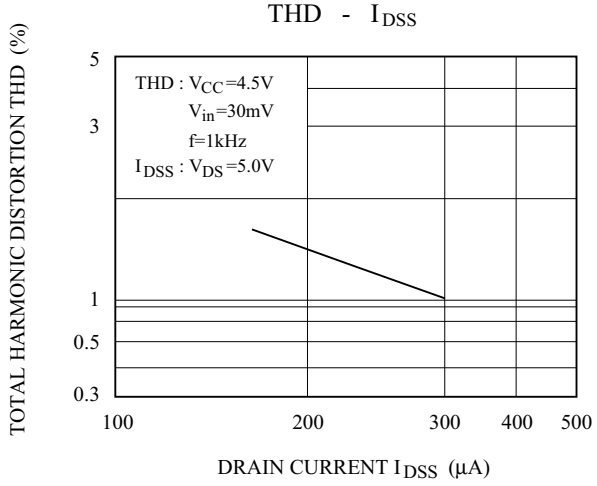
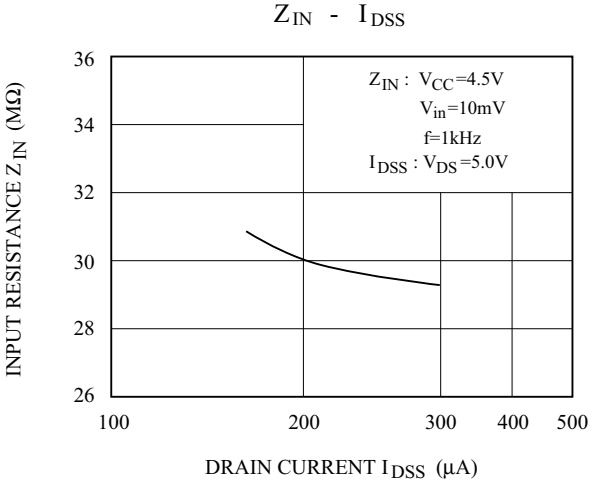
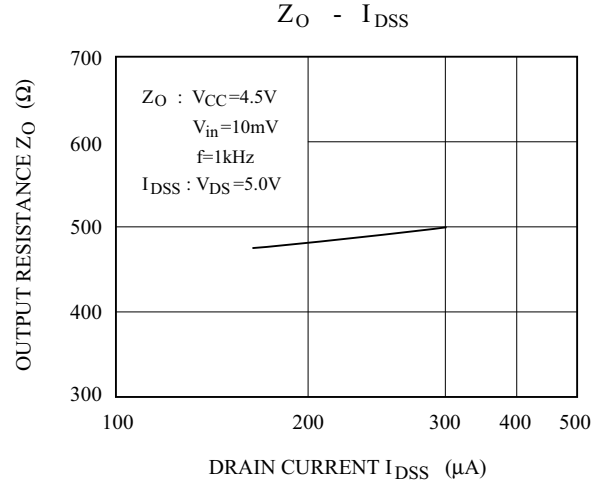
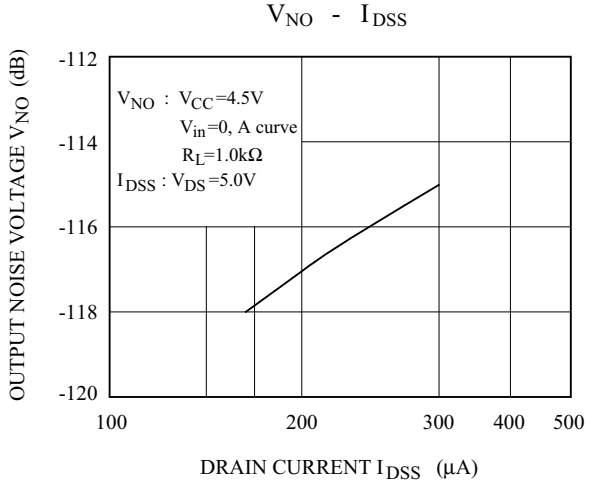

G_V - I_{DSS}
G_V : V_{CC}=4.5V
V_{in}=10mV
R_L=1.0kΩ
f=1kHz
I_{DSS} : V_{DS}=5.0V
VOLTAGE GAIN G_V (dB)
2
0
-2
-4
-6
-8
-10
100
200
300
400
500
DRAIN CURRENT I_{DSS} (μA)

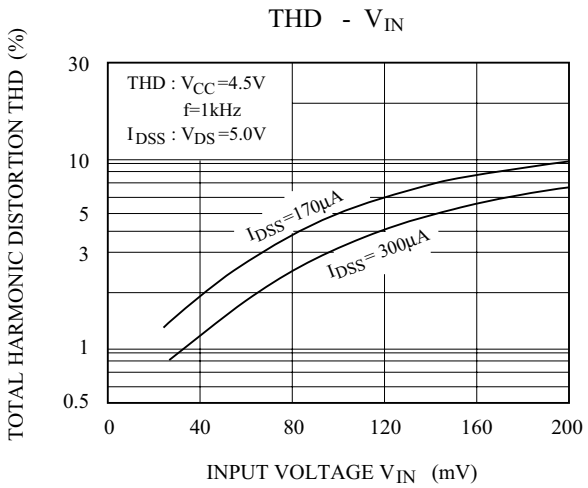

ΔG_{VV} - I_{DSS}
REDUCED VOLTAGE CHARACTERISIC ΔG_{VV} (dB)
ΔG_{VV} : V_{CC}=4.5V → 1.5V
V_{in}=10mV
f=1kHz
I_{DSS} : V_{DS}=5.0V
2
0
-2
-4
-6
100
200
300
400
500
DRAIN CURRENT I_{DSS} (μA)

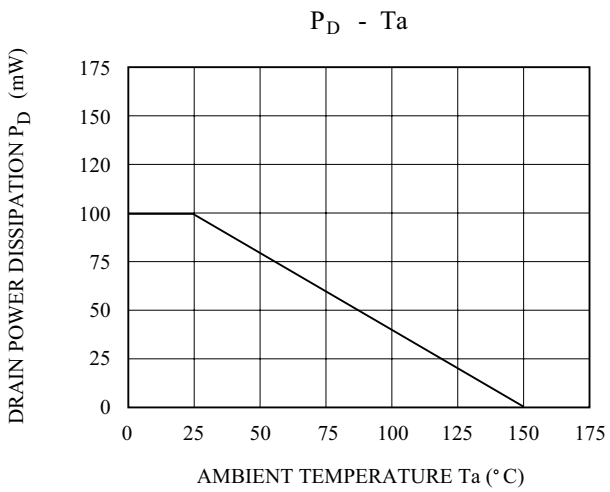

THD - I_{DSS}
THD : V_{CC}=4.5V
V_{in}=30mV
f=1kHz
I_{DSS} : V_{DS}=5.0V
TOTAL HARMONIC DISTORTION THD (%)
5
3
1
0.5
0.3
100
200
300
400
500
DRAIN CURRENT I_{DSS} (μA)


Z_{IN} - I_{DSS}
Z_{IN} : V_{CC}=4.5V
V_{in}=10mV
f=1kHz
I_{DSS} : V_{DS}=5.0V
INPUT RESISTANCE Z_{IN} (MΩ)
36
34
32
30
28
26
100
200
300
400
500
DRAIN CURRENT I_{DSS} (μA)


Z_O - I_{DSS}
Z_O : V_{CC}=4.5V
V_{in}=10mV
f=1kHz
I_{DSS} : V_{DS}=5.0V
OUTPUT RESISTANCE Z_O (Ω)
700
600
500
400
300
100
200
300
400
500
DRAIN CURRENT I_{DSS} (μA)


V_{NO} - I_{DSS}
V_{NO} : V_{CC}=4.5V
V_{in}=0, A curve
R_L=1.0kΩ
I_{DSS} : V_{DS}=5.0V
OUTPUT NOISE VOLTAGE V_{NO} (dB)
-112
-114
-116
-118
-120
100
200
300
400
500
DRAIN CURRENT I_{DSS} (μA)


THD - V_{IN}
TOTAL HARMONIC DISTORTION THD (%)
THD : V_{CC}=4.5V
f=1kHz
I_{DSS} : V_{DS}=5.0V
I_{DSS}=170μA
I_{DSS}= 300μA
30
10
5
3
1
0.5
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)