

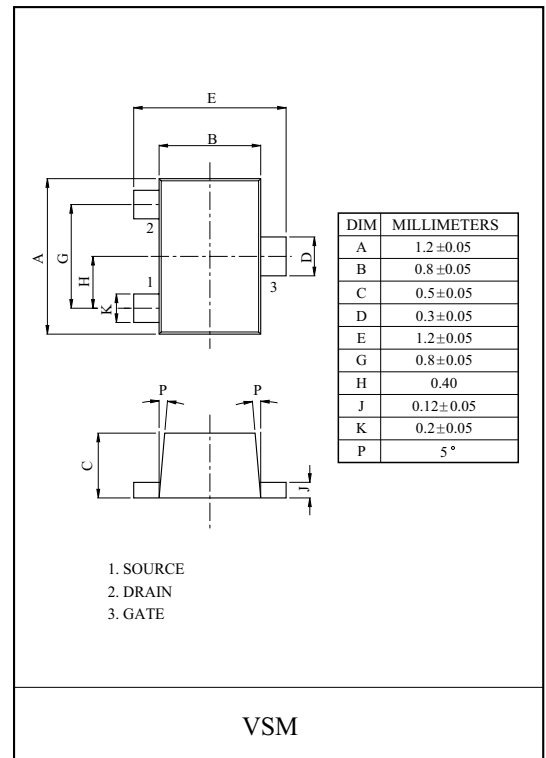
CONDENSER MICROPHONE APPLICATION.

### FEATURES

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

### MAXIMUM RATING (Ta=25 °C)

| 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       | °C   |
| Storage Temperature Range | $T_{stg}$ | -55 ~ 150 | °C   |

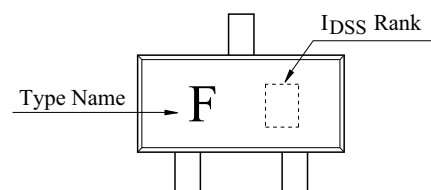


### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

| CHARACTERISTIC               | SYMBOL           | TEST CONDITION                      | MIN. | TYP. | MAX. | UNIT    |
|------------------------------|------------------|-------------------------------------|------|------|------|---------|
| Gate-Drain Breakdown Voltage | $V_{(BR)GDO}$    | $I_G = -100 \mu A$                  | -20  | -    | -    | V       |
| Gate-Source Cut-off Voltage  | $V_{GS(OFF)}$    | $V_{DS} = 5V, I_D = 1 \mu A$        | -    | -0.6 | -1.5 | V       |
| Drain Current                | $I_{DSS}$ (Note) | $V_{DS} = 5V, V_{GS} = 0$           | 150  | -    | 320  | $\mu A$ |
| Forward 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



# KTK597V

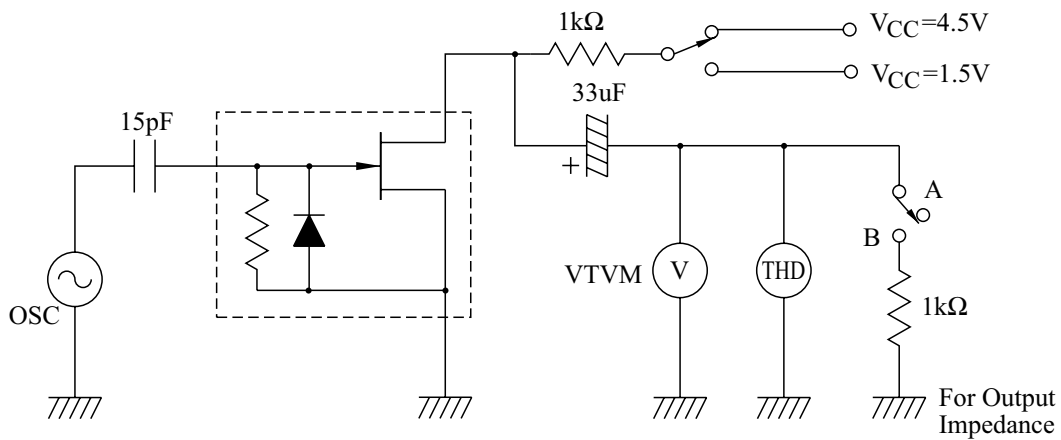
## ELECTRICAL CHARACTERISTICS

( $T_a=25\text{ }^\circ\text{C}$ ,  $V_{CC}=4.5\text{V}$ ,  $R_L=1\text{k}\Omega$ ,  $C_{in}=15\text{pF}$ , See Specified Test Circuit.)

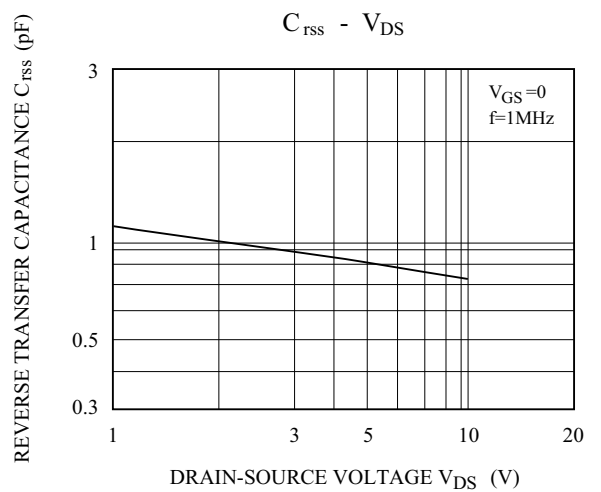
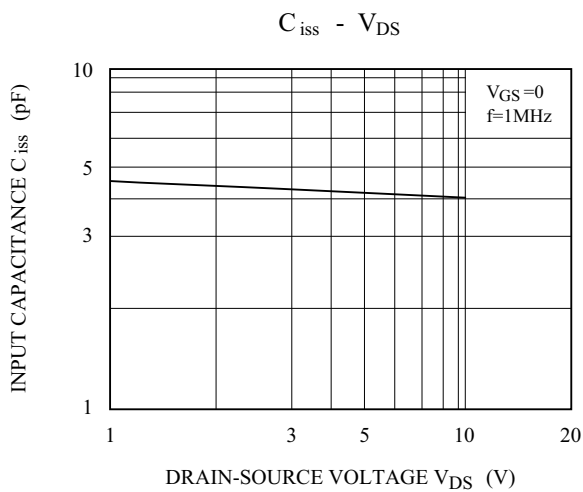
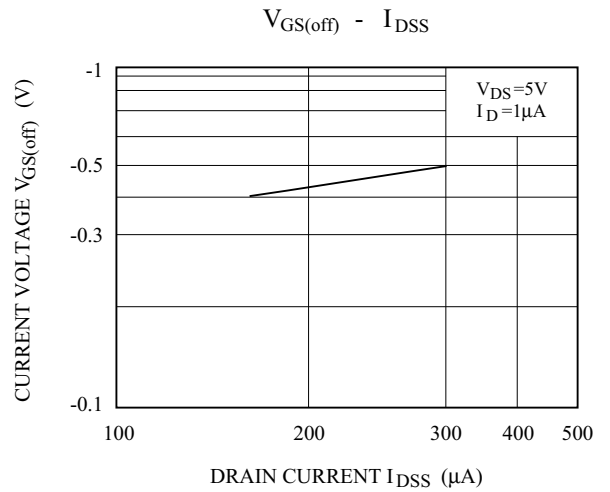
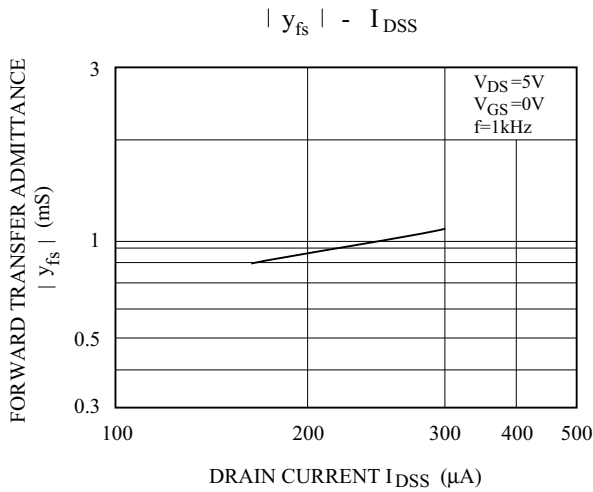
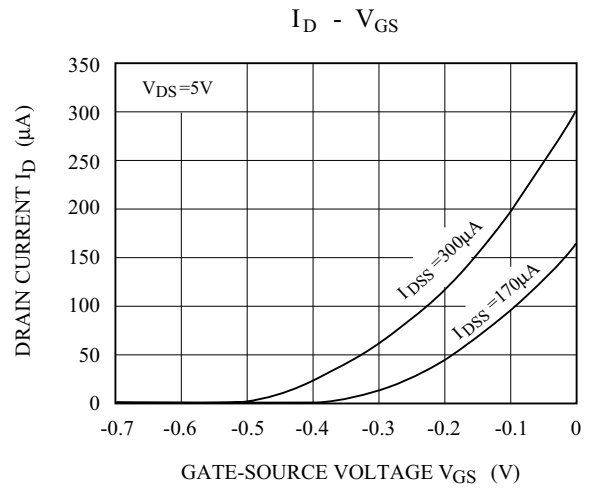
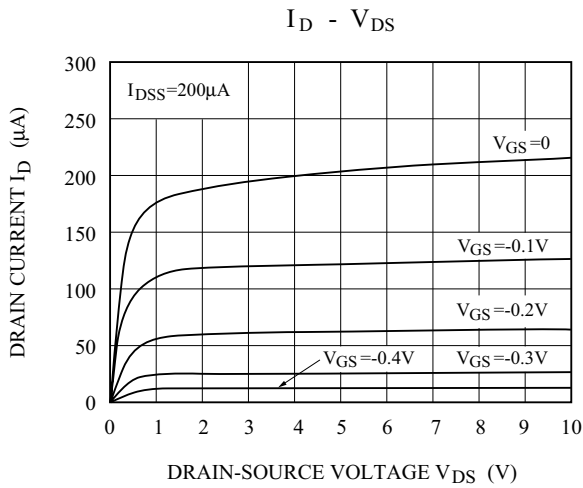
| CHARACTERISTIC                 | SYMBOL          | TEST CONDITION  | MIN. | TYP. | MAX. | UNIT             |
|--------------------------------|-----------------|---|------|------|------|------------------|
| Voltage Gain                   | $G_V$           | $V_{in}=10\text{mV}$ , $f=1\text{kHz}$  | -    | -3.0 | -    | dB               |
| Reduced Voltage Characteristic | $\Delta G_{VV}$ | $V_{in}=10\text{mV}$ , $f=1\text{kHz}$ $V_{CC}=4.5\text{V} \rightarrow 1.5\text{V}$ | -    | -1.2 | -4.0 | dB               |
| Frequency Characteristic       | $\Delta G_{VF}$ | $f=1\text{kHz} \sim 110\text{Hz}$   | -    | -    | -1.0 | dB               |
| Input Resistance               | $Z_{in}$        | $f=1\text{kHz}$   | 25   | -    | -    | $\text{M}\Omega$ |
| Output Resistance              | $Z_O$           | $f=1\text{kHz}$   | -    | -    | 700  | $\Omega$         |
| Total Harmonic Distortion      | THD             | $V_{in}=30\text{mV}$ , $f=1\text{kHz}$  | -    | 1.0  | -    | %                |
| Output Noise Voltage           | $V_{NO}$        | $V_{in}=0$ , A curve  | -    | -    | -110 | dB               |

## SPECIFIED TEST CIRCUIT

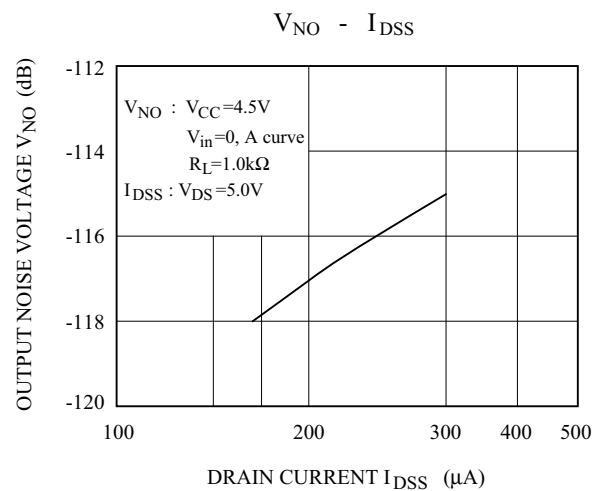
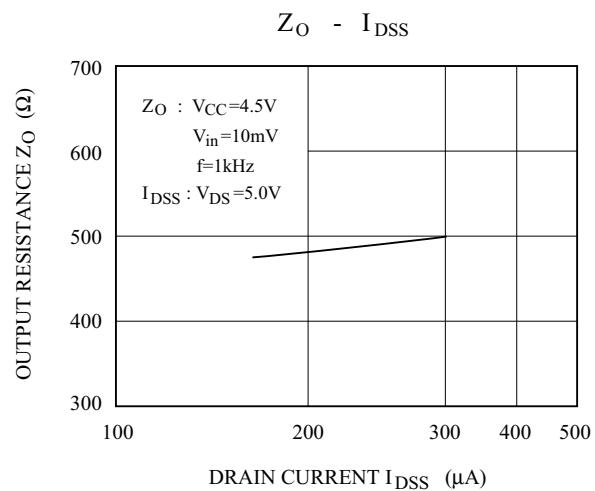
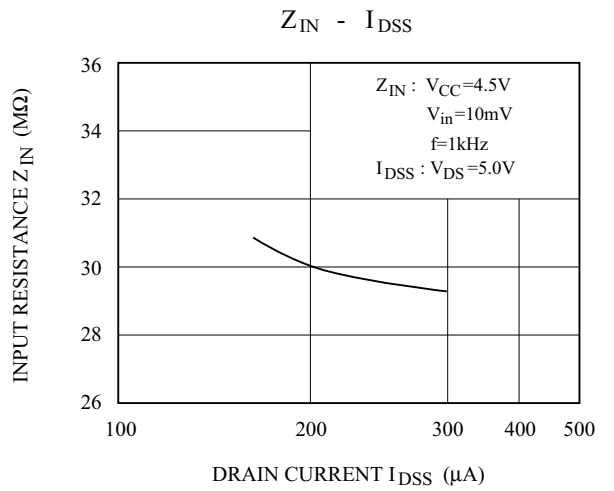
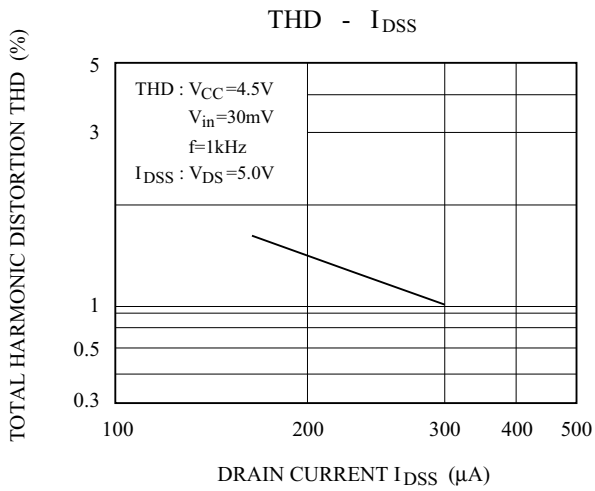
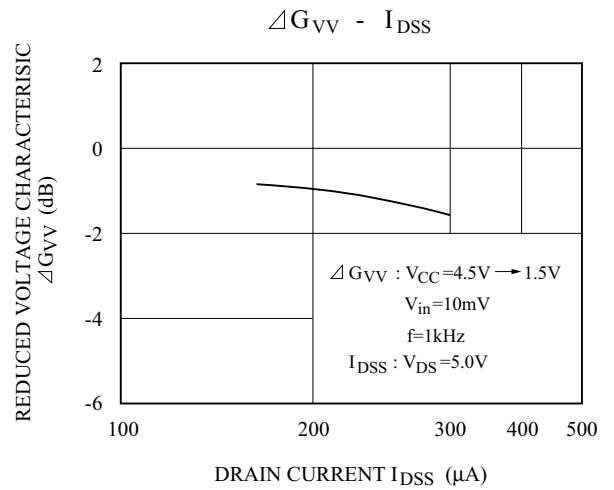
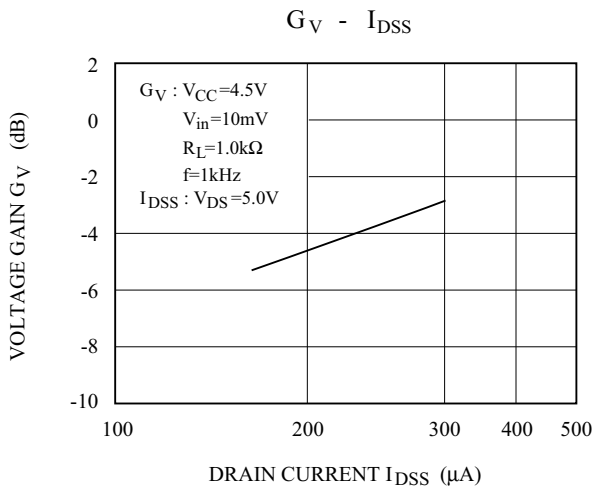
- Voltage gain.
- Frequency Characteristic.
- Distortion.
- Reduced Voltage Characteristic.



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