

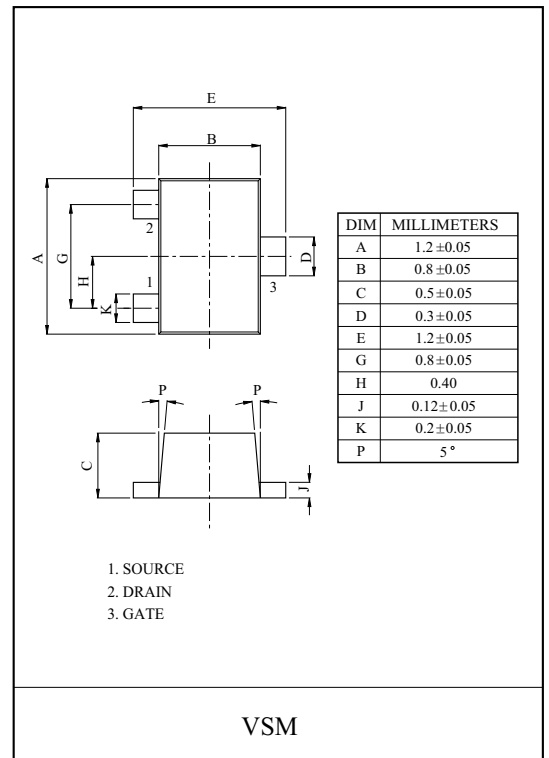
CONDENSER MICROPHONE APPLICATION.

#### FEATURES

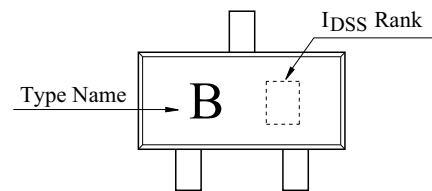
- Specially Suited for Use in Audio, Telephone Electret Capacitor Microphones.
- High Voltage Gain.
- Ultra Small & Thin Size Package.

#### MAXIMUM RATING (Ta=25 °C)

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



#### Marking



# KTK598V

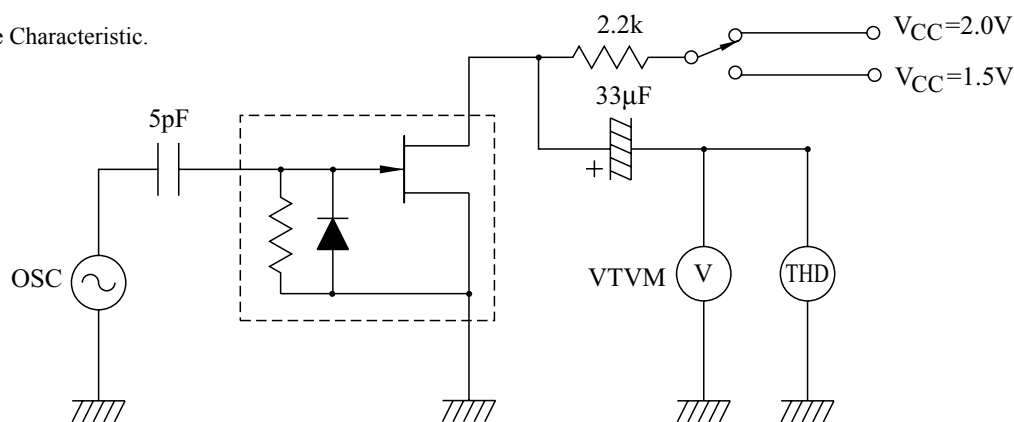
## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

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	$V_{GS(OFF)}$	$V_{DS} = 2V, I_D = 1 \mu A$	-	-0.6	-1.0	V
Drain Current	$I_{DSS}$ (Note)	$V_{DS} = 2V, V_{GS} = 0$	150	-	350	$\mu A$
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 2V, V_{GS} = 0, f = 1kHz$	1.35	1.85	-	mS
Input Capacitance	$C_{iss}$	$V_{DS} = 2V, V_{GS} = 0, f = 1MHz$	-	4.0	-	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 2V, V_{GS} = 0, f = 1MHz$	-	0.65	-	pF
Voltage Gain	$G_V$	$V_{DD} = 2V, R_L = 2.2K \Omega, C_g = 5pF, f = 1kHz, V_{IN} = 10mV$	-	1.4	-	dB
Reduced Voltage Characteristic	$\Delta G_{VV}$	$V_{DD} = 2V \sim 1.5V, R_L = 2.2K \Omega, C_g = 5pF, f = 1kHz, V_{IN} = 10mV$	-	-0.8	-	dB
Frequency Characteristic	$\Delta G_{VF}$	$V_{DD} = 2V, R_L = 2.2K \Omega, C_g = 5pF, f = 1kHz \sim 100Hz, V_{IN} = 10mV$	-	0	-1	dB
Input Resistance	$Z_{in}$	$f = 1kHz$	25	-	-	M $\Omega$
Output Resistance	$Z_O$	$f = 1kHz$	-	-	700	$\Omega$
Total Harmonic Distortion	THD	$V_{DD} = 2V, R_L = 2.2K \Omega, C_g = 5pF, f = 1kHz, V_{IN} = 50mV$	-	0.6	-	%
Output Noise Voltage	$V_{NO}$	$V_{DD} = 2V, R_L = 1K \Omega, C_g = 10pF, A\text{-Curve}$	-	-110	-104	dB

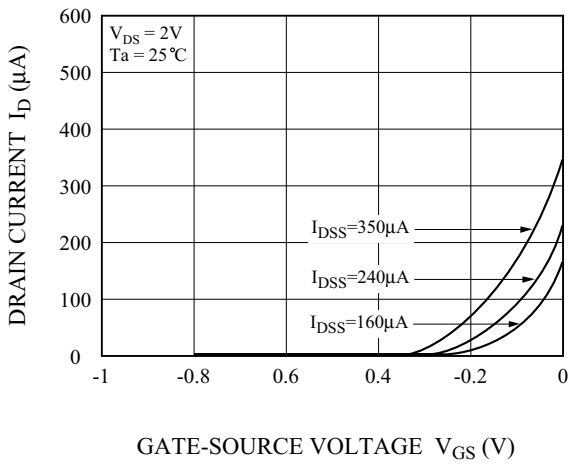
Note :  $I_{DSS}$  Classification Y(1):150~240, GR(2):210~350

## SPECIFIED TEST CIRCUIT

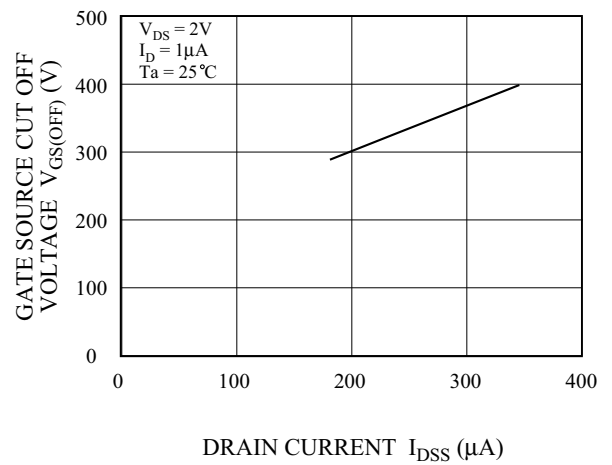
- Voltage Gain.
- Frequency Characteristic.
- Distortion.
- Reduced Voltage Characteristic.



$V_{GS} - I_D$

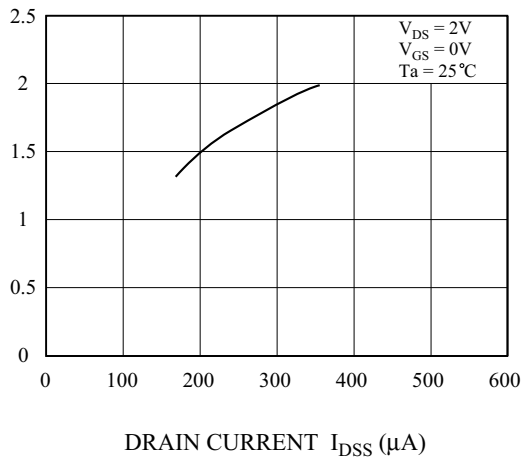


$V_{GS(OFF)} - I_{DSS}$

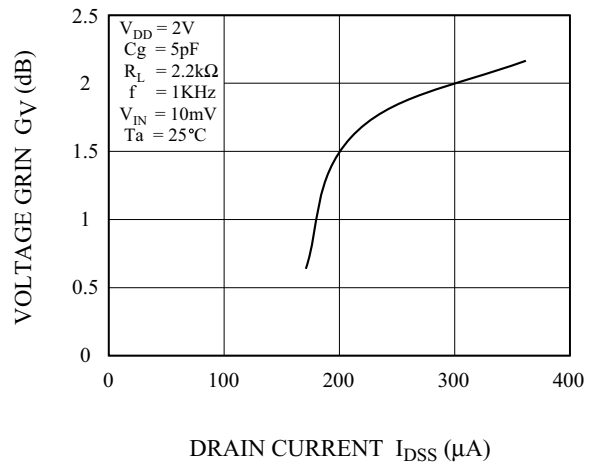


FORWARD TRANSFER ADMITTANCE  $|y_{fs}|$  (mS)

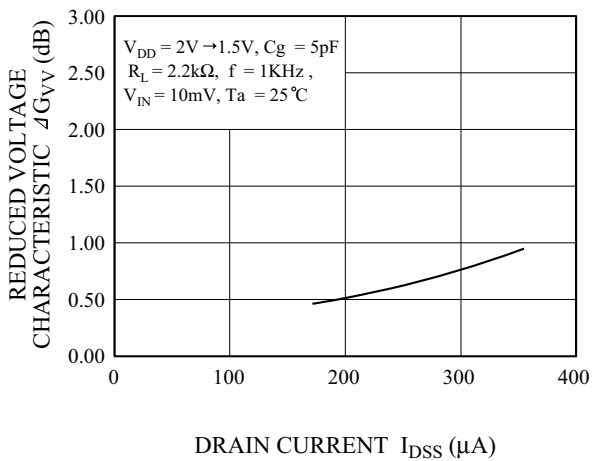
$|y_{fs}| - I_{DSS}$



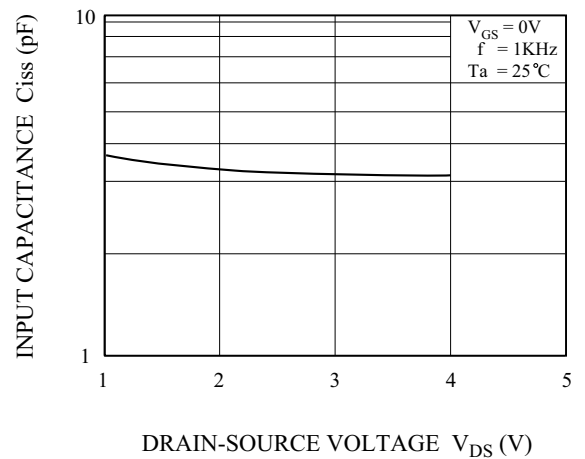
$G_V - I_{DSS}$



$\Delta G_{VV} - I_{DSS}$



$C_{iss} - V_{DS}$



# KTK598V

