

CONDENSER MICROPHONE APPLICATION

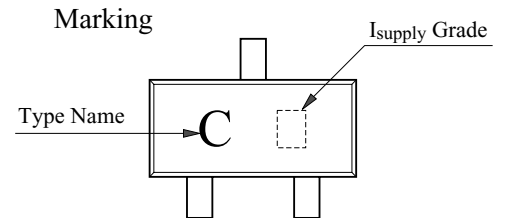
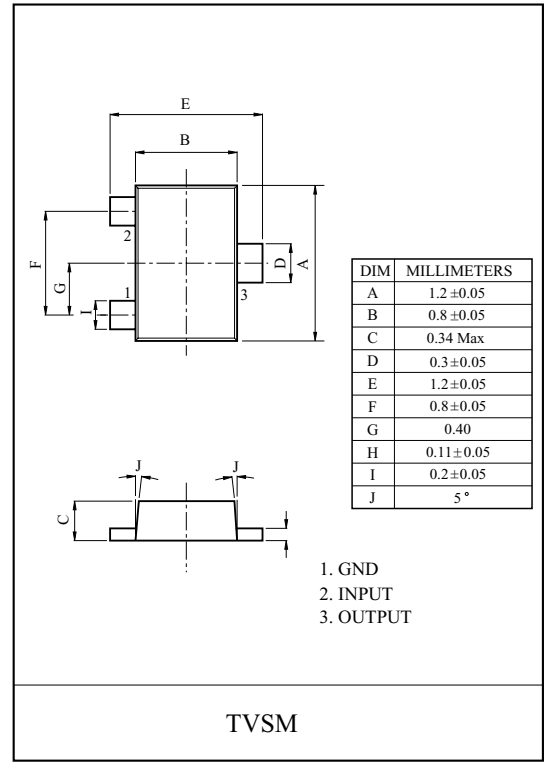
TENTATIVE

FEATURES

- Specially Suited for Use in Audio and Telephone Electret Capacitor Microphones(ECM)
- High Voltage Gain
- High ESD Voltage
- Ultra-Small and Thin Size Package

MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{SUPPLY}	6	V
Supply Current	I _{SUPPLY}	10	mA
Input Current	I _{INPUT}	1	mA
Power Dissipation	P _D	100	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 ~ 150	°C



KTK698TV

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{SUPPLY}		1.4	-	5.0	V
Supply Current	I_{SUPPLY}	$V_{SUPPLY}=2.0V$	70	-	250	μA
Input Capacitance	C_{INPUT}	$f=1MHz$	-	2	-	pF
Voltage Gain	G_V	$f=1kHz, V_{SUPPLY}=2.0V$	11.5	13	14.5	dB
Gain Reduction with Frequency	ΔG_V	$f=1kHz\sim 100Hz, V_{SUPPLY}=2.0V$	-	-	-1.0	dB
Input Impedance	Z_{INPUT}	$f=1kHz, V_{SUPPLY}=2.0V$	30	-	-	$M\Omega$
Output Impedance	Z_{OUTPUT}	$f=1kHz, V_{SUPPLY}=2.0V$	-	-	2.2	$k\Omega$
Total Harmonic Distortion	THD	$f=1kHz, V_{SUPPLY}=2.0V, V_{IN}=20mV$	-	0.5	-	%
Output Noise	e_n	A-Weighted, $V_{SUPPLY}=3.0V$	-	-97	-	dB

[Ta=25 °C , $R_L = 2.2 k\Omega$, $C_{IN}=5pF$, $V_{SIGNAL} = 28mV_{pp}$, See Specified AC Test Circuit]

Note1 : Absolute Maximum Ratings indicate limits beyond which damage to the device may occur.

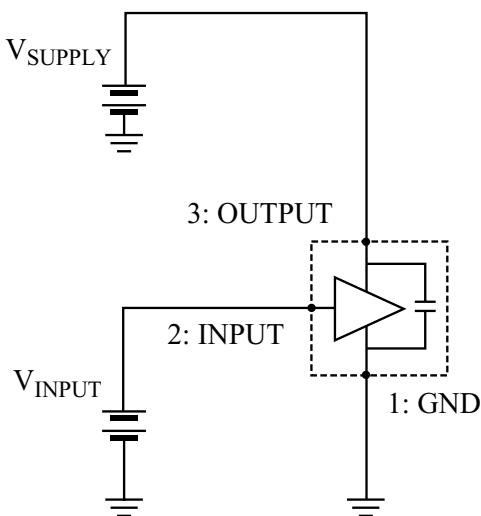
Note2 : ESD Test Condition is IEC 61000-4-2 Standard which is 330 Ω in series with 150pF

Note3 : Supply Voltage indicates conditions for which the device is intended to be functional, but specific performance is not guaranteed for guaranteed specifications and the conditions, see the Electrical Characteristics.

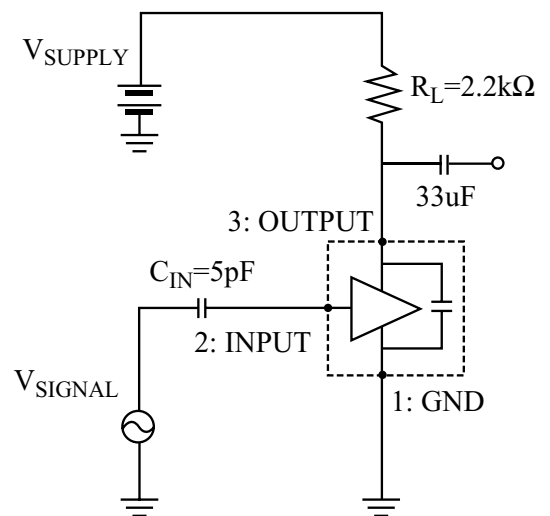
* I_{SUPPLY} and V_{SUPPLY} Classification

Classification	Y (1)	GR (2)
$I_{SUPPLY}(\mu A)$	70~180	130~250
$V_{SUPPLY}(V)$	1.4~5.0	1.8~5.0

DC Parameter Test Circuit



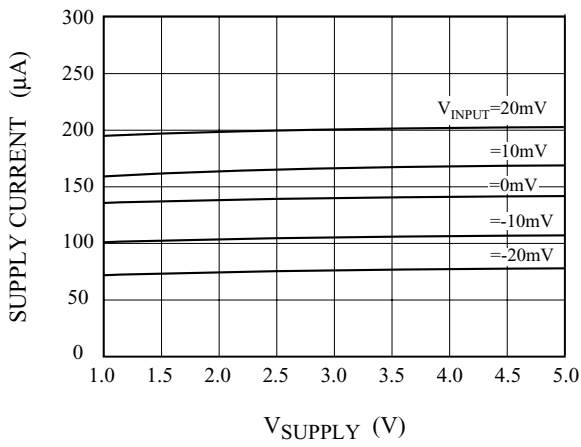
AC Parameter Test Circuit



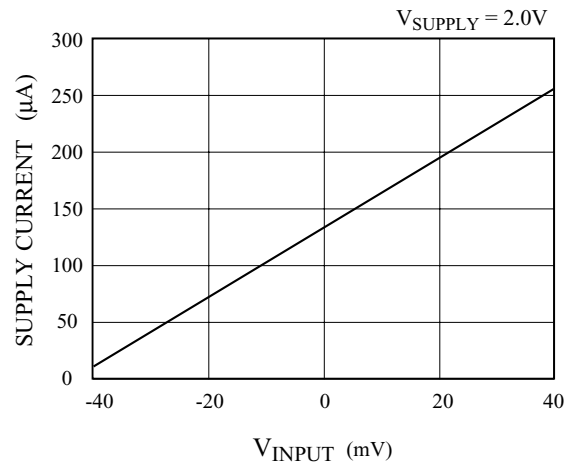
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TYPICAL CHARACTERISTICS

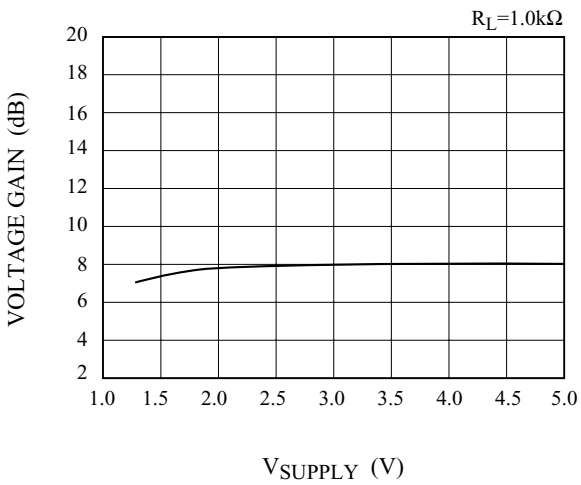
$I_{SUPPLY} - V_{SUPPLY}$



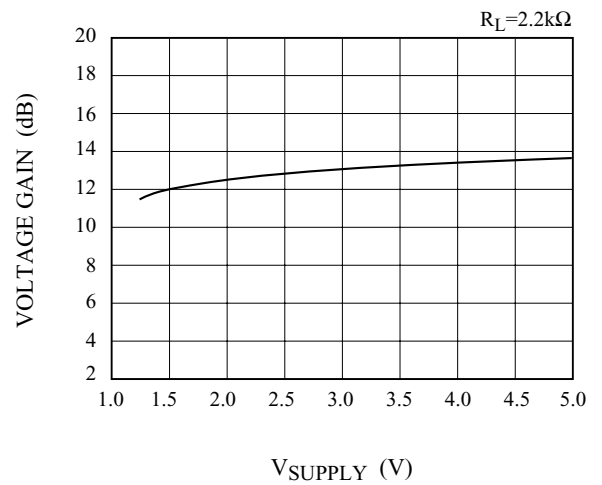
$I_{SUPPLY} - V_{SUPPLY}$



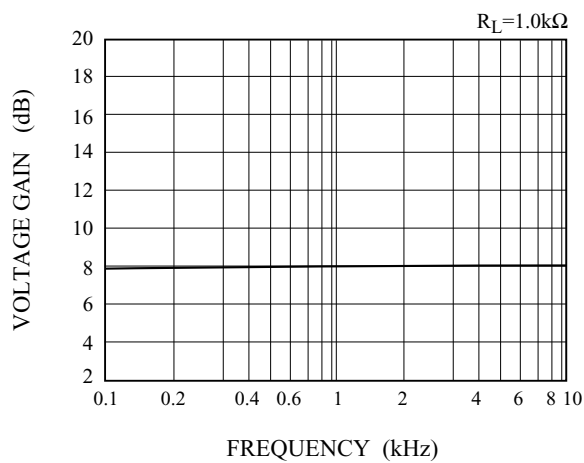
$G_V - V_{SUPPLY}$



$G_V - V_{SUPPLY}$



$G_V - Frequency$



$G_V - Frequency$

