



SANYO Semiconductors

## DATA SHEET

# EC4K11MF — CMOS IC Amplifier IC for Condenser Microphone

## Features

- High gain, high SNR, high input resistance, low voltage operation, low power consumption.
- Ultrasmall package permitting applied sets to be small and slim.

## Specifications

### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum Power Supply Voltage	V <sub>DD</sub> max	R <sub>L</sub> =2.2kΩ, Connection	4	V
Maximum Input Voltage	V <sub>IN</sub> max		-0.5 to +0.5	V
Allowable Power Dissipation	P <sub>D</sub>		100	mW
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C
Operating Temperature	T <sub>opr</sub>		-20 to +70	°C

### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Power Supply Voltage	V <sub>DDopr</sub>		2		3.6	V
Consumption Current	I <sub>DD</sub>	V <sub>DD</sub> =2.0V, V <sub>IN</sub> =0V, R <sub>L</sub> =2.2kΩ	140	170	200	μA
Input Capacitance	C <sub>i</sub>	V <sub>DD</sub> =2.0V, f=1MHz		2.7		pF
[Ta=25°C, V <sub>DD</sub> =2.0V, R <sub>L</sub> =2.2kΩ, C <sub>i</sub> =3pF, See specified Test Circuit.]						
Voltage Gain	G <sub>V</sub>	f=1kHz, V <sub>IN</sub> =10mV	9.5	12	14	dB
Frequency Characteristics	ΔG <sub>Vf</sub>	f=1kHz to 100Hz		0	-1	dB
Total Harmonic Distortion	THD	f=1kHz, V <sub>IN</sub> =10mV		0.25		%
Output Noise Voltage	V <sub>NO</sub>	V <sub>IN</sub> =0V, A curve		-90	-84	dB

Marking : KD

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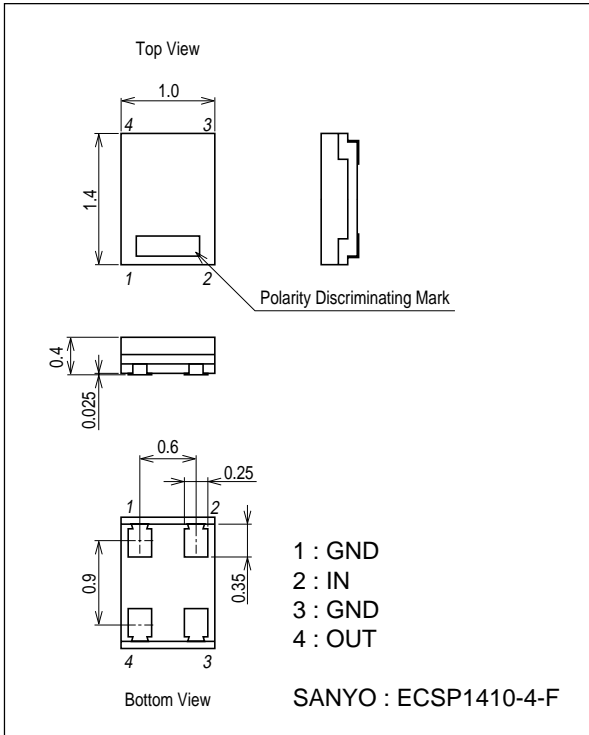
**SANYO Semiconductor Co., Ltd.**

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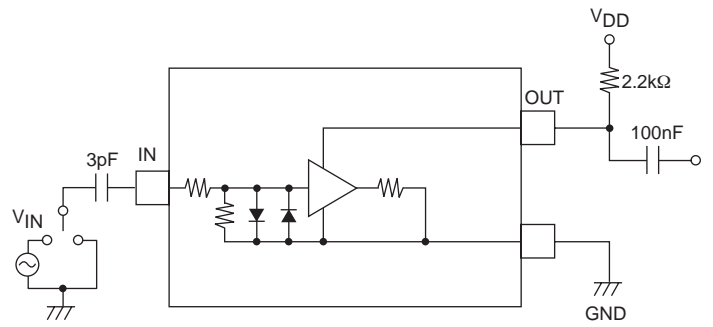
# EC4K11MF

## Package Dimensions

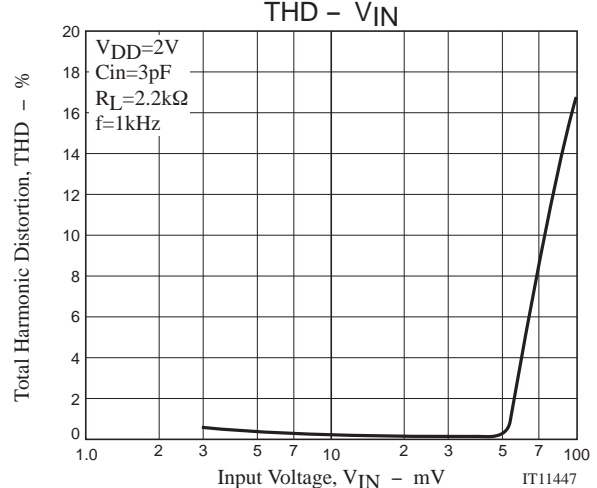
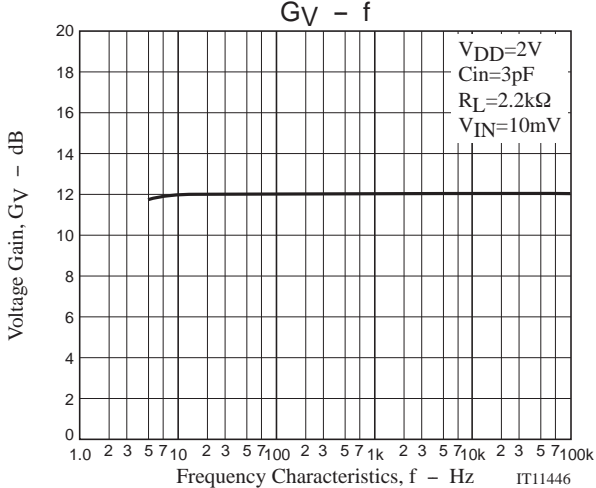
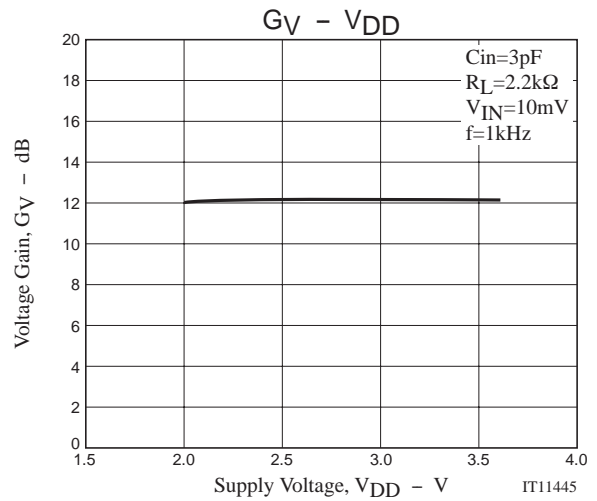
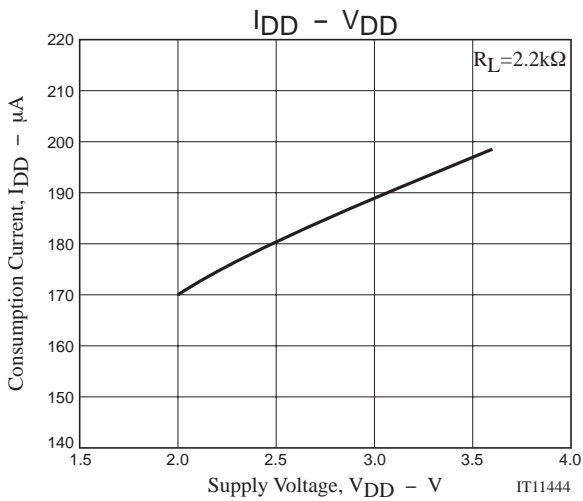
unit : mm (typ)  
7046-001



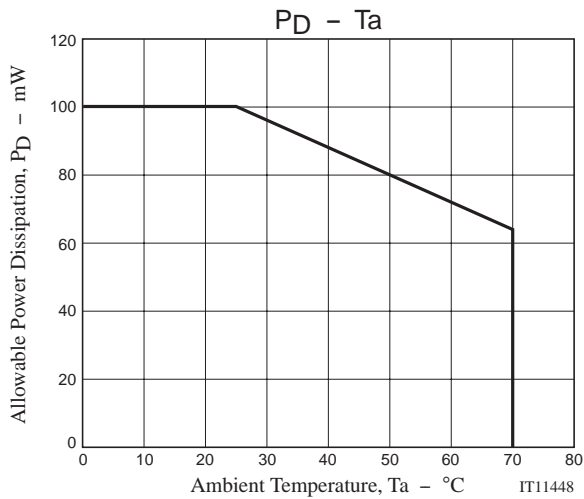
## Test Circuit



IT11449



## EC4K11MF



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