



UM5101

Voice Recording and Reproducing

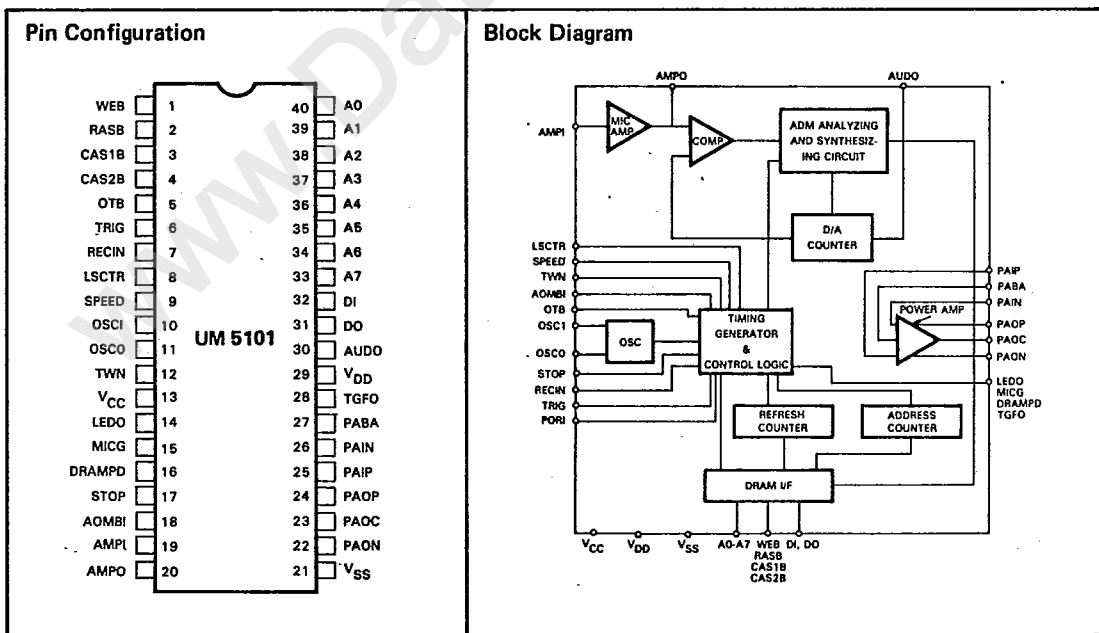
ADVANCED PRODUCT DESCRIPTION

Features

- DRAM is used as a voice data memory. One or two 64K DRAM can be selected by pin
- Bit rates can be selected by changing oscillator frequency and pin control (8K-32K bps)
- Built-in voice recording mic-amplifier and voice reproducing power amplifier minimizes the external components to a minimum
- Built-in 8-bit D/A converter
- The RC oscillator makes sample rate changing feasible
- Low stand-by current in stand-by mode
- Talking back mode and manual control mode is selected
- Single power supply (Vmax. = 9V)

General Description

UM5101 is an ADM voice recording & reproducing IC. Voice data is stored in external DRAM which can be directly connected to UM5101.



www.DataSheet4U.com



UM5101

OTB

This pin is used to indicate one or two DRAMs being connected externally. When OTB is "H", one DRAM is connected. It should be "L" if two DRAMs are connected.

OSCI, OSCO

Oscillator input and output pin. A resistor is placed between these two pins in order to oscillate. If 11 pin OSCO is triggered low, the talking back function will pause for a period as long as trigger time.

STOP

If talking back operates over two times and the STOP pin is triggered by high, then talking back function will immediately stop.

RECIN

In manual mode, it will enter record state when this pin is triggered.

TRIG

In talking back mode, it will carry out record and reproduce 16 times, when this pin is triggered. In manual mode, it will enter reproduce state when this pin is triggered, a CdS can be used to trigger this pin.

V_{DD}, V_{SS}

Power pins.

A0 ~ A7

DRAM address pins.

WEB, RASB, CAS1B, CAS2B

DRAM control timing pins.

DI, DO

DRAM data input and output pins.

LEDO

N-channel open drain output. It will stay in "L" during the record state.

MICG

N-channel open drain output. It will stay in "L" during the record state.

DRAMPD

N-channel open drain output. It will stay in "L" when it is not in standby state.

TGFO

P-channel open drain output. It will stay in "H" during the reproduce state.

PAIP, PABA, PAIN, PAOP, PAOC, PAON

Power amplifies input and output pins. PAIP is positive terminal. PAOP is used to drive PNP transistor. PAON is used to drive NPN transistor. PAOC is connected to output push-pull. PAIN is negative terminal. PABA is bias input pin.

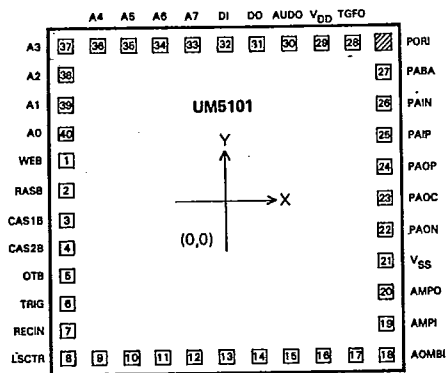
AUDO

D/A reproducing output.

V_{CC}

Power supply for logic-level conversion. The high level of output pins: A0-A7, DI, RASB, CAS1B, CAS2B, WEB is "V_{CC}". V_{CC} should less than or equal to V_{DD}.

Barding Diagram



Pad No.	X	Y	Pad No.	X	Y
1.	-1352.04	485.90	21.	1368.04	-489.46
2.	-1360.93	274.57	22.	1389.89	-263.40
3.	-1352.04	24.38	23.	1368.04	-27.43
4.	-1352.04	-204.47	24.	1368.04	226.06
5.	-1352.04	-440.94	25.	1368.04	454.91
6.	-1360.93	-690.47	26.	1368.04	694.44
7.	-1360.93	-927.10	27.	1388.04	937.51
8.	-1312.93	-1180.59	28.	1368.04	1163.57
9.	-1082.55	-1173.48	29.	1003.05	1183.89
10.	-839.47	-1180.59	30.	781.56	1180.59
11.	-595.88	-1169.92	31.	494.54	1180.59
12.	-376.43	-1173.48	32.	277.62	1191.01
13.	77.47	-1253.49	33.	46.99	1180.59
14.	286.00	-1253.49	34.	-166.12	1183.89
15.	550.93	-1253.49	35.	-391.92	1183.89
16.	764.03	-1253.49	36.	-609.09	1183.89
17.	1038.10	-1197.61	37.	-826.52	1180.59
18.	1263.90	-1187.45	38.	-1052.58	1183.89
19.	1368.04	-958.09	39.	-1352.04	1152.91
20.	1368.04	-711.45	40.	1360.93	930.40
				1352.04	708.41

unit: μ m



Application Circuit

(For Talking Back Mode)

