



■ INTRODUCTION

SN67d07B is a 7 seconds one-channel single chip voice synthesizer IC which contains a PWM Direct Drive Circuit. There are two IO pins (one input, one IO), which can be configured as two trigger pins, or one trigger and one output. By filling a coding form, users' applications, including section combination, trigger modes, and different output status, can be easily implemented.

■ FEATURES

- ◆ Single power supply 2.4V – 5.5V
- ◆ 7 seconds voice capacity is provided
- ◆ 1-bit input port (P1) and 1-bit I/O port (P2) are provided
- ◆ 16*1 bits RAM are provided
- ◆ Built in a high quality speech synthesizer
- ◆ Two different playing rate, 6KHz and 8KHz.
- ◆ Built in a PWM Direct Drive circuit output BUO1 and BUO2 directly connected to Speaker for sound output
- ◆ System clock: 2MHZ
- ◆ Low Voltage Reset

■ PIN ASSIGNMENT

www.DataSheet4U.com

Symbol	I/O	Function Description
P1	I	Input port
P2	I/O	I/O port
VDD	I	Positive power supply
OSC	I	Oscillation component connection pin
GND	I	Negative power supply
BUO1	O	PWM output 1
BUO2	O	PWM output 2
TEST	I	For Sonix test
TEST1	I	For Sonix test

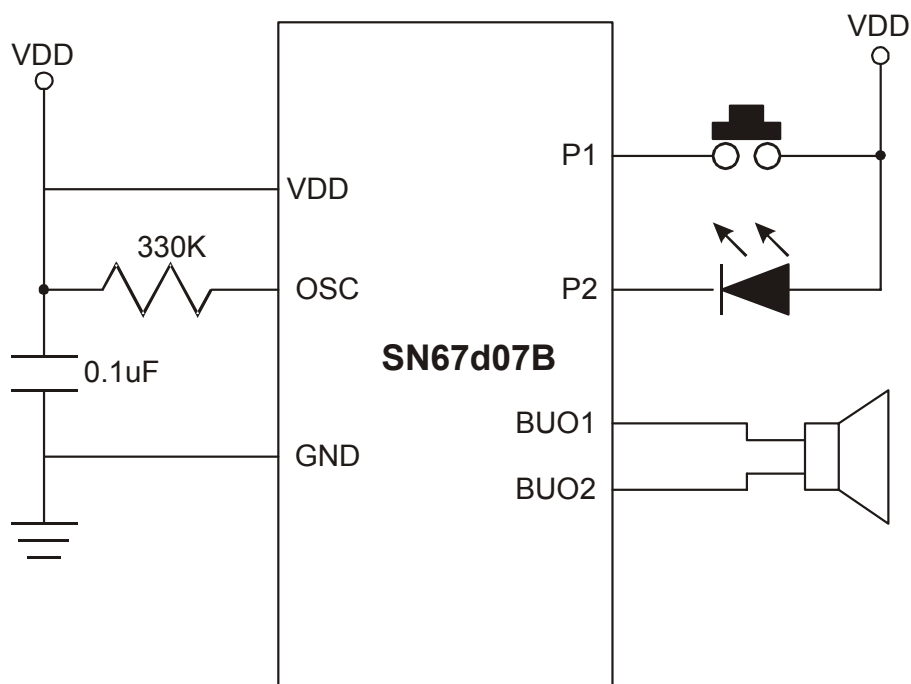
**■ ABSOLUTE MAXIMUM RATINGS**

Items	Symbol	Min	Max	Unit.
Supply Voltage	V_{DD-V}	-0.3	6.0	V
Input Voltage	V_{IN}	GND-0.3	$V_{DD}+0.3$	V
Operating Temperature	T_{OP}	-20.0	70.0	°C
Storage Temperature	T_{STG}	-55.0	125.0	°C

■ ELECTRICAL CHARACTERISTICS

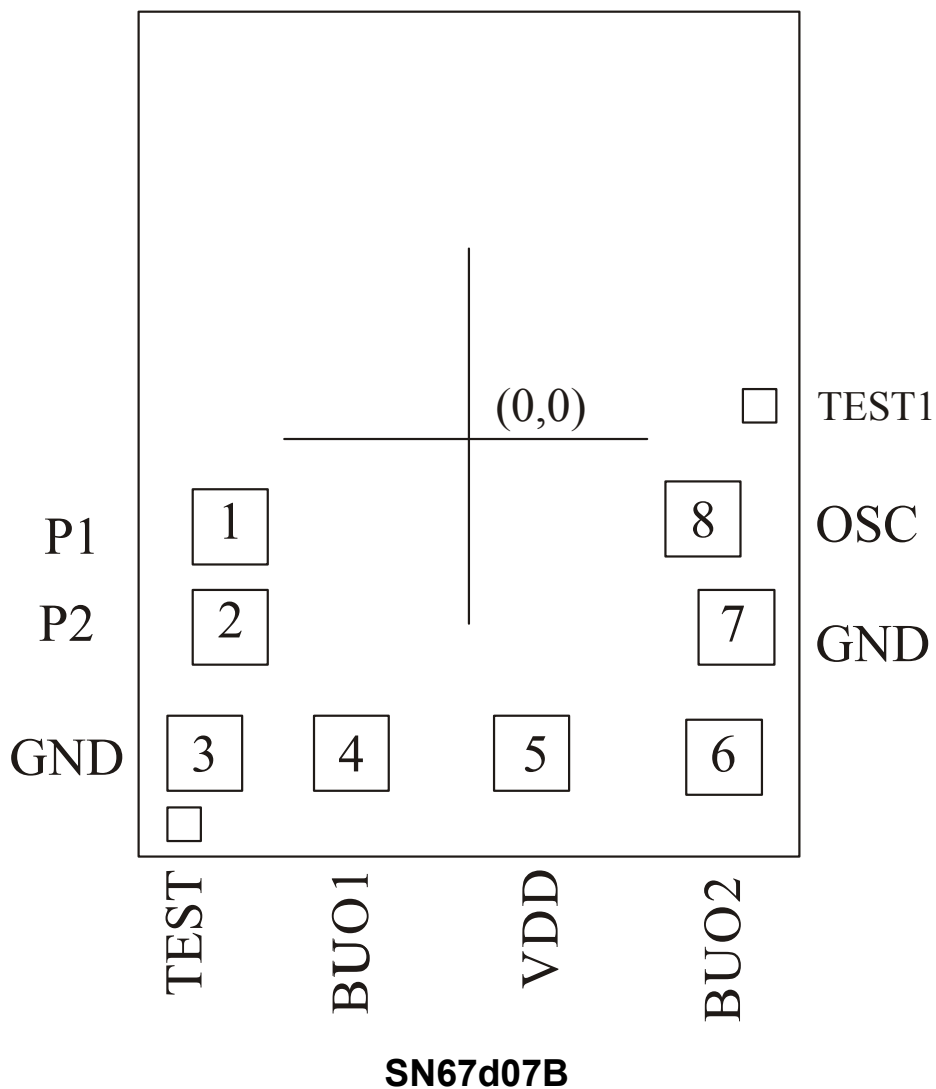
Item	Sym.	Min.	Typ.	Max.	Unit	Condition
Operating Voltage	V_{DD}	2.4	3.0	5.5	V	
Standby current	I_{SBY}	-	2.0	-	μA	$V_{DD}=3V$, no load
Operating Current	I_{OPR}	-	250	-	μA	$V_{DD}=3V$, no load
Input current of P1, P2	I_{IH}	-	3.0	10.0	μA	$V_{DD}=3V, V_{IN}=3V$
Drive current of P2	I_{OD}	1.5	2	-	mA	$V_{DD}=3V, V_O=2.4V$
Sink Current of P2	I_{OS}	2.0	3	-	mA	$V_{DD}=3V, V_O=0.4V$
Drive current of Buo1	I_{OD}	100	120	-	mA	$V_{DD}=3V, Buo1=1.5V$
Sink Current of Buo1	I_{OS}	100	120	-	mA	$V_{DD}=3V, Buo1=1.5V$
Drive Current of Buo2	I_{OD}	100	120	-	mA	$V_{DD}=3V, Buo2=1.5V$
Sink Current of Buo2	I_{OS}	100	120	-	mA	$V_{DD}=3V, Buo2=1.5V$
Oscillation Freq.	F_{OSC}	-	2.0	-	MHz	$V_{DD}=3V$

■ APPLICATION CIRCUIT



Note: Please bond all of V_{DD} and V_{SS} pins.

■ BONDING PAD



Note: The substrate MUST be connected to Vss in PCB layout.

**DISCLAIMER**

The information appearing in Sonix web pages ("this publication") is believed to be accurate.

However, this publication could contain technical inaccuracies or typographical errors. The reader should not assume that this publication is error-free or that it will be suitable for any particular purpose. SONIX makes no warranty, express, statutory implied or by description in this publication or other documents which are referenced by or linked to this publication. In no event shall Sonix be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever, including, without limitation, those resulting from loss of use, data or profits, whether or not advised of the possibility of damage, and on any theory of liability, arising out of or in connection with the use or performance of this publication or other documents which are referenced by or linked to this publication.

This publication was developed for products offered in Taiwan. Sonix may not offer the products discussed in this document in other countries. Information is subject to change without notice. Please contact Sonix or its local representative for information on offerings available. Integrated circuits sold by Sonix are covered by the warranty and patent indemnification provisions stipulated in the terms of sale only.

The application circuits illustrated in this document are for reference purposes only. SONIX DISCLAIMS ALL WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE. SONIX reserves the right to halt production or alter the specifications and prices, and discontinue marketing the Products listed at any time without notice. Accordingly, the reader is cautioned to verify that the data sheets and other information in this publication are current before placing orders.

Products described herein are intended for use in normal commercial applications. Applications involving unusual environmental or reliability requirements, e.g. military equipment or medical life support equipment, are specifically not recommended without additional processing by SONIX for such application.