======== Contents ========

AMENDENT HISTORY

Version	Date	Description
Ver 1.0	March 11, 2003	V1.0 first issue
Ver 1.1	April 18, 2003	Modify the pin assignment table Add bonding pad information & application circuit
Ver 1.2	April 21, 2003	Modify application circuit & bonding pad information
Ver 1.3	July 30, 2003	Modify operation current from typ.4mA -> MAX. 4mA
Ver 1.5	October 21, 2005	According to Ver 1.4 PDF for Modify “TYPE” setting. Ver 1.5 Modify Supply Voltage from Max 6V to Max 3.6V

1. INTRODUCTION

The SNR008 is a signal power, 8M-bit, read only memory. It is organized as 1M bytes, operates for single 3V power supply, support static standby mode. The SNR008 embedded two different interfaces, one is a standard 8-bit interface bus which compatible with SNL310, another one is a special 8-bit AD (address/data) bus which compatible with SNC710.

SNR008 offers automatic power-down, with power-down controlled by the chip enable "CE\". When chip enable goes to high, SNR008 will entry power-down mode in order to save the power consumption.

2. FEATURES

- Power supply: 2.4V ~ 3.6V
- Memory Size: 8M-bit
- Totally static operation
- Embedded a standard 8-bit bus interface compatible with SNL310 or a 8-bit AD (address/data) bus interface compatible with SNC710
- Access time: 150ns @3V

3. PIN ASSIGNMENTS

Symbol	I/O	Standard ROM interface	AD Bus interface
TYPE	I	0: Standard ROM type	1: AD Bus interface
A[8..19]	I	Standard ROM Address [8..19]	NC
A[7]	I	Standard ROM Address A7	TESTM
A[6]	I	Standard ROM Address A6	Bank Select 4
A[5]	I	Standard ROM Address A5	Bank Select 3
A[4]	I	Standard ROM Address A4	Bank Select 2
A[3]	I	Standard ROM Address A3	Bank Select 1
A[2]	I	Standard ROM Address A2	Bank Select 0
A[1]	I	Standard ROM Address A1	ALECLK
A[0]	I	Standard ROM Address A0	READY
D[0..7]	I/O	Standard ROM Data [0..7]	Address/Data bus [0..7]
CEB	I	Standard ROM Chip Enable	Chip Enable
OEB	I	Standard ROM Output Enable	NC
VDD	P	3.3volt Positive Power supply	3.3volt Positive Power supply
GND	P	Ground	Ground

4. Memory mapping for AD Bus Interface

For 8-bit AD (address/data) bus interface, all the address and data communication between SNC710 and SNR008 are through data bus D[0..7]. SNC710 allows user to connect maximum 2 external mask ROM, and SNR008 has 5 bank select pins (BS0~BS4) to specify the memory region of each mask ROM.

BS4~BS0	Address Region	BS4~BS0	Address Region
00100	0x0200000 ~ 0x027FFFF	10010	0x0900000 ~ 0x097FFFF
00101	0x0280000 ~ 0x02FFFFF	10011	0x0980000 ~ 0x09FFFFF
00110	0x0300000 ~ 0x037FFFF	10100	0x0A00000 ~ 0x0A7FFFF
00111	0x0380000 ~ 0x03FFFFF	10101	0x0A80000 ~ 0x0AFFFFF
01000	0x0400000 ~ 0x047FFFF	10110	0x0B00000 ~ 0x0B7FFFF
01001	0x0480000 ~ 0x04FFFFF	10111	0x0B80000 ~ 0x0BFFFFF
01010	0x0500000 ~ 0x057FFFF	11000	0x0C00000 ~ 0x0C7FFFF
01011	0x0580000 ~ 0x05FFFFF	11001	0x0C80000 ~ 0x0CFFFFF
01100	0x0600000 ~ 0x067FFFF	11010	0x0D00000 ~ 0x0D7FFFF
01101	0x0680000 ~ 0x06FFFFF	11011	0x0D80000 ~ 0x0DFFFFF
01110	0x0700000 ~ 0x077FFFF	11100	0x0E00000 ~ 0x0E7FFFF
01111	0x0780000 ~ 0x07FFFFF	11101	0x0E80000 ~ 0x0EFFFFF
10000	0x0800000 ~ 0x087FFFF	11110	0x0F00000 ~ 0x0F7FFFF
10001	0x0880000 ~ 0x08FFFFF	11111	0x0F80000 ~ 0x0FFFFFF

Table-1

Note: For the address region 0x00000~0x01FFFFF are reserved, and the setting of bank select pins BS4~BS0 CAN'T be the range 0000~0x0011.

5. ABSOLUTE MAXIMUM RATINGS

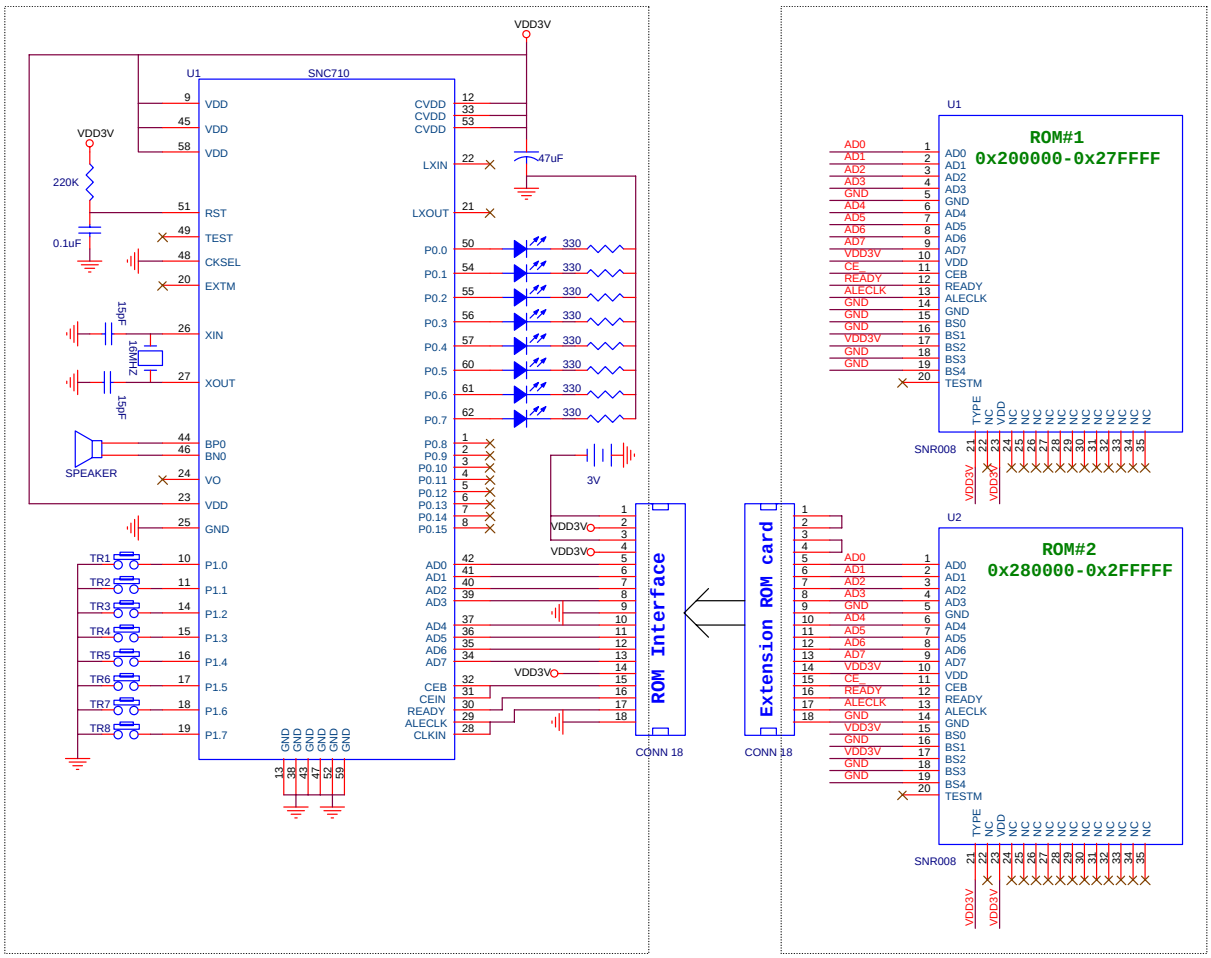
Items	Symbol	Min	Max	Unit.
Supply Voltage	V_{DD}-V	-0.3	3.6	V
Input Voltage	V_{IN}	GND-0.3	V_{DD}+0.3	V
Operating Temperature	T_{OP}	0	55	^{o}C
Storage Temperature	T_{STG}	-55.0	125.0	^{o}C

6. ELECTRICAL CHARACTERISTICS

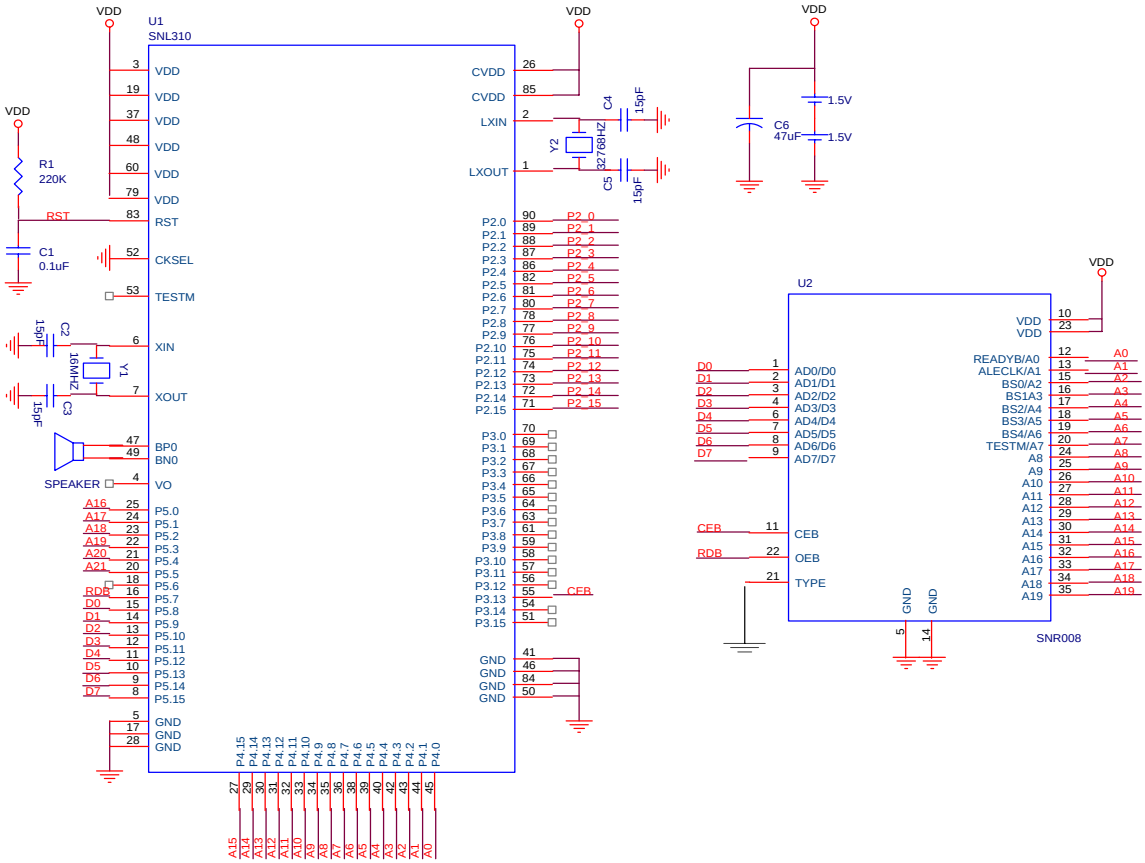
Item	Sym.	Min.	Typ.	Max.	Unit	Condition
Operating Voltage	V_{DD}	2.4	-	3.6	V	
Standby current	I_{SBY}	-	1.5	2.0	uA	V_{DD}=3V, no load
Operating Current	I_{OPR}	-	4	-	mA	V_{DD}=3V, no load
Address access time	tAA	-	-	150	ns	Vdd=3V

7. Application circuit

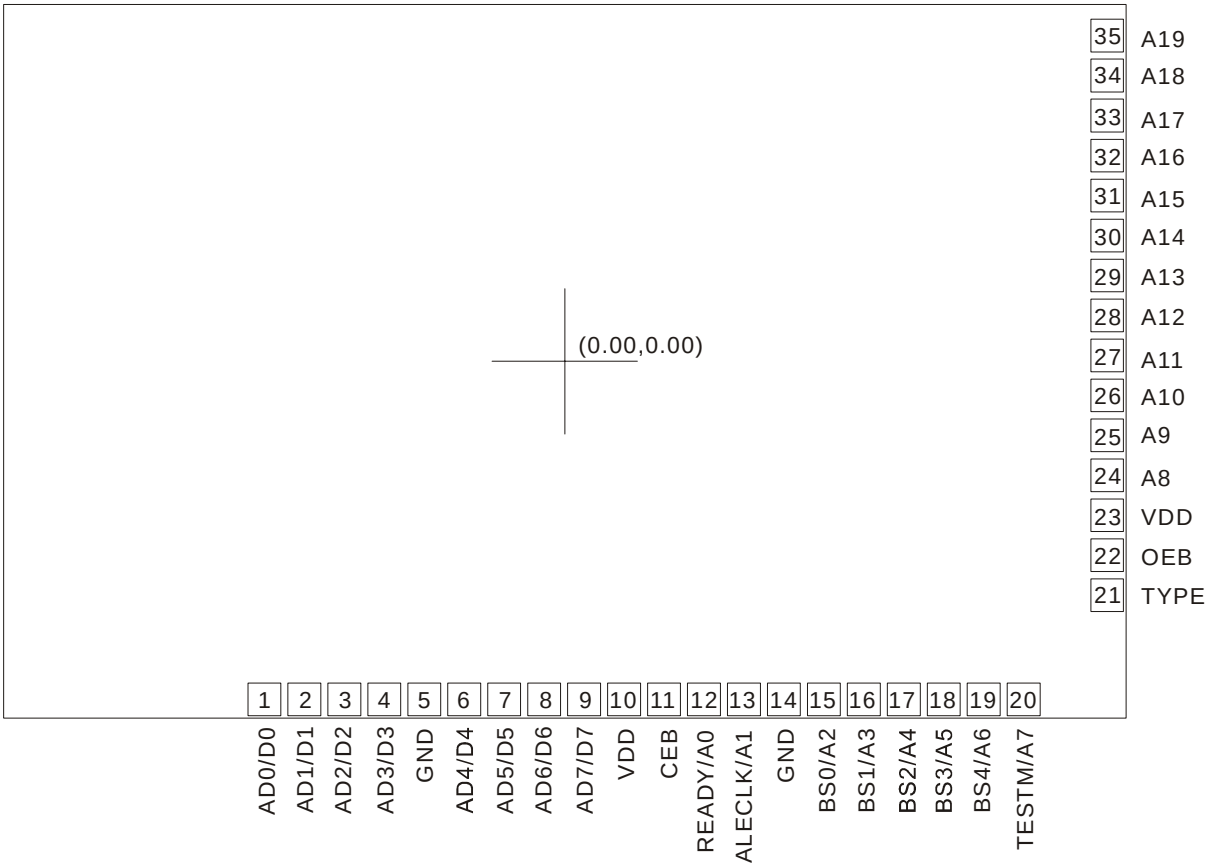
7.1 AD Bus Interface (with SNC710)



7.2 Standard ROM interface (with SNL310)



8. BONDING PAD



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

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