

HN29W3221 Series

4M word x 8-bit CMOS AND Flash Memory

Preliminary Product Preview

HITACHI

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The Hitachi HN29W3221 is a 4M word x 8-bit CMOS Flash Memory, realizing on-board programming. It programs or erases data with only on-board power supply (3.3V Vcc supply). It does not require complicated external control to program data or erase data because of its automatic programming function and automatic erase function. Also it provides sector erase function ((512+16)byte x 8192 sectors) as erase mode. Therefore, it can erase one sector data randomly. The HN29W3221 can control programming and erasing by command inputs.

- Low power dissipation :
 - ICC = 50mA max (Random Read)
 - ICC = 40mA max (Serial Read)
 - ICC = 50 μ A max (Standby)
 - ICC = 15mA typ (Erase/Program)
 - ICC = 5 μ A max (Deep standby)
- Erase/Write cycle : 100,000 times(min.)
- Package : 56pin-TSOP(I) (14 x 20mm²)

Features

- On-board single power supply (Vcc) :
Vcc = 3.3V $\pm$ 0.3V
- Organization
Flash Memory: (4M(4194304bit)
+ 128K(131072bit)) x 8
Data register: (512 + 16) x 8
- Automatic programming :
Sector program time : 1 ms typ.
Address, data latch function
Internal automatic program verify function
Status data polling function
- Automatic erase :
Sector erase time : 1 ms typ.
System bus free
Internal automatic erase verify function
Status data polling function
- Erase mode :
Sector erase ((512 + 16)byte x 8192 sectors)
Block erase ((2048+64)byte x 2048 blocks)
Chip erase
- Fast access time :
Random read 120ns/150ns max.
Serial read Memory cell to data register: 1 μ s max.
Serial access time: 50ns min.

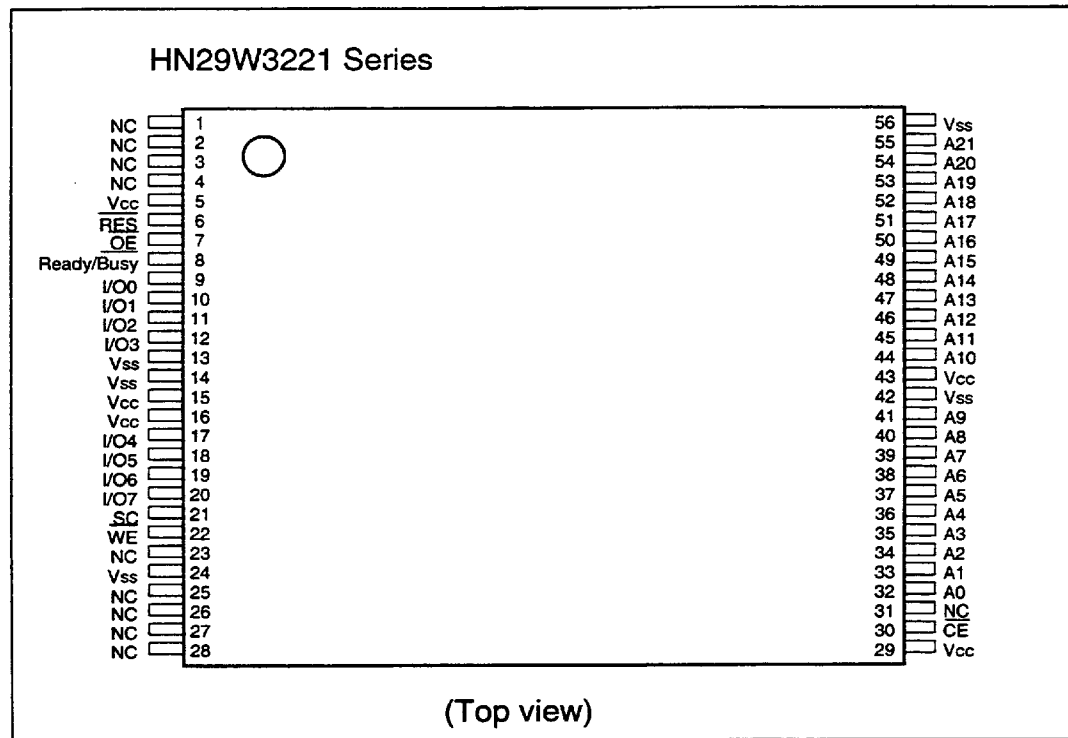
Note : Initial samples will perform serial read only.

Order Information

Type NO	Access time		Package
	Random	Serial	
HN29W3221T-12	120ns	50ns	56pin plastic TSOP
HN29W3221T-15	150ns	50ns	(TFP-56D)

Pin Arrangement

56pin
14 x 20mm²
0.5mm pitch
TSOP(I)

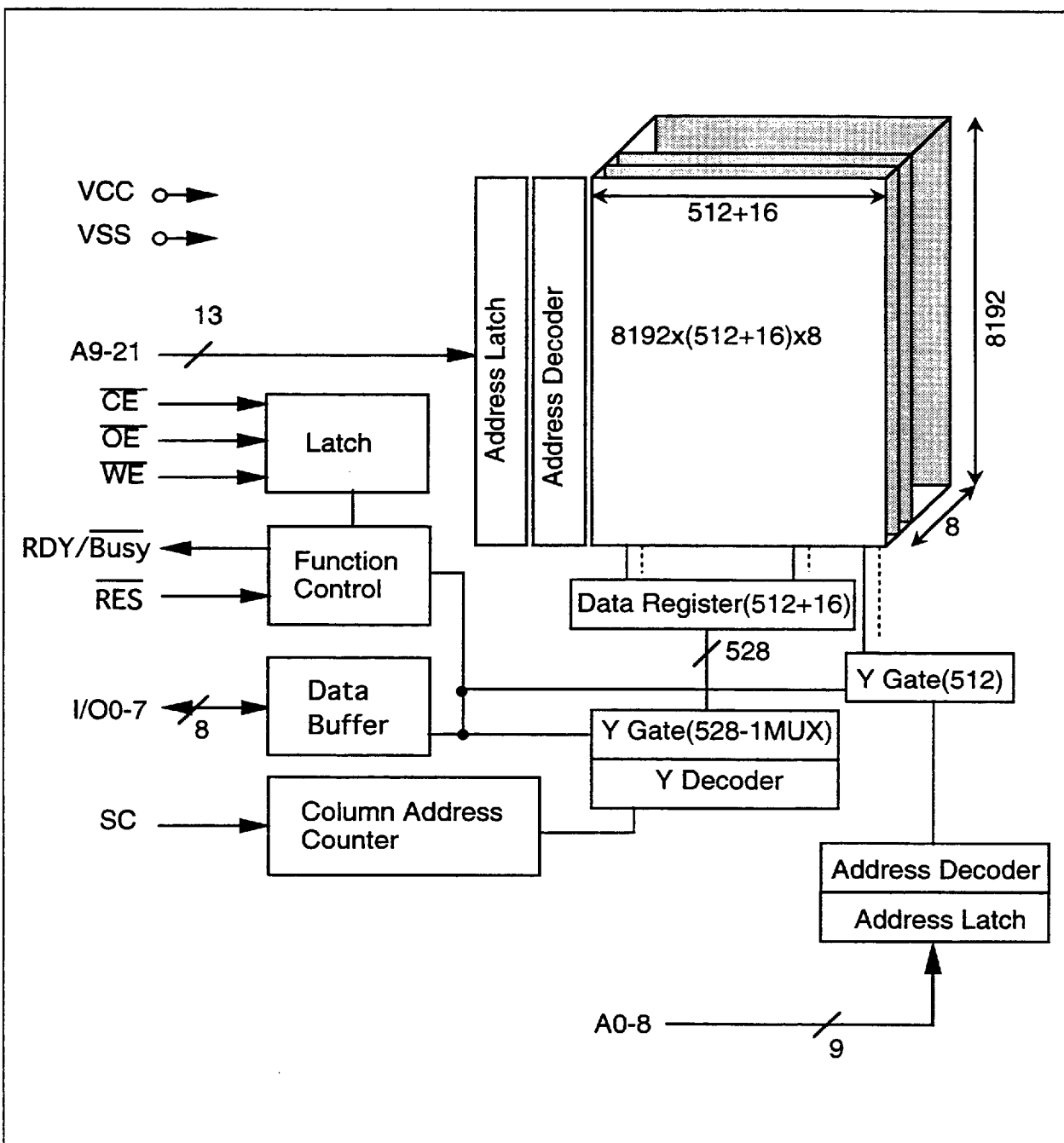


Pin Description

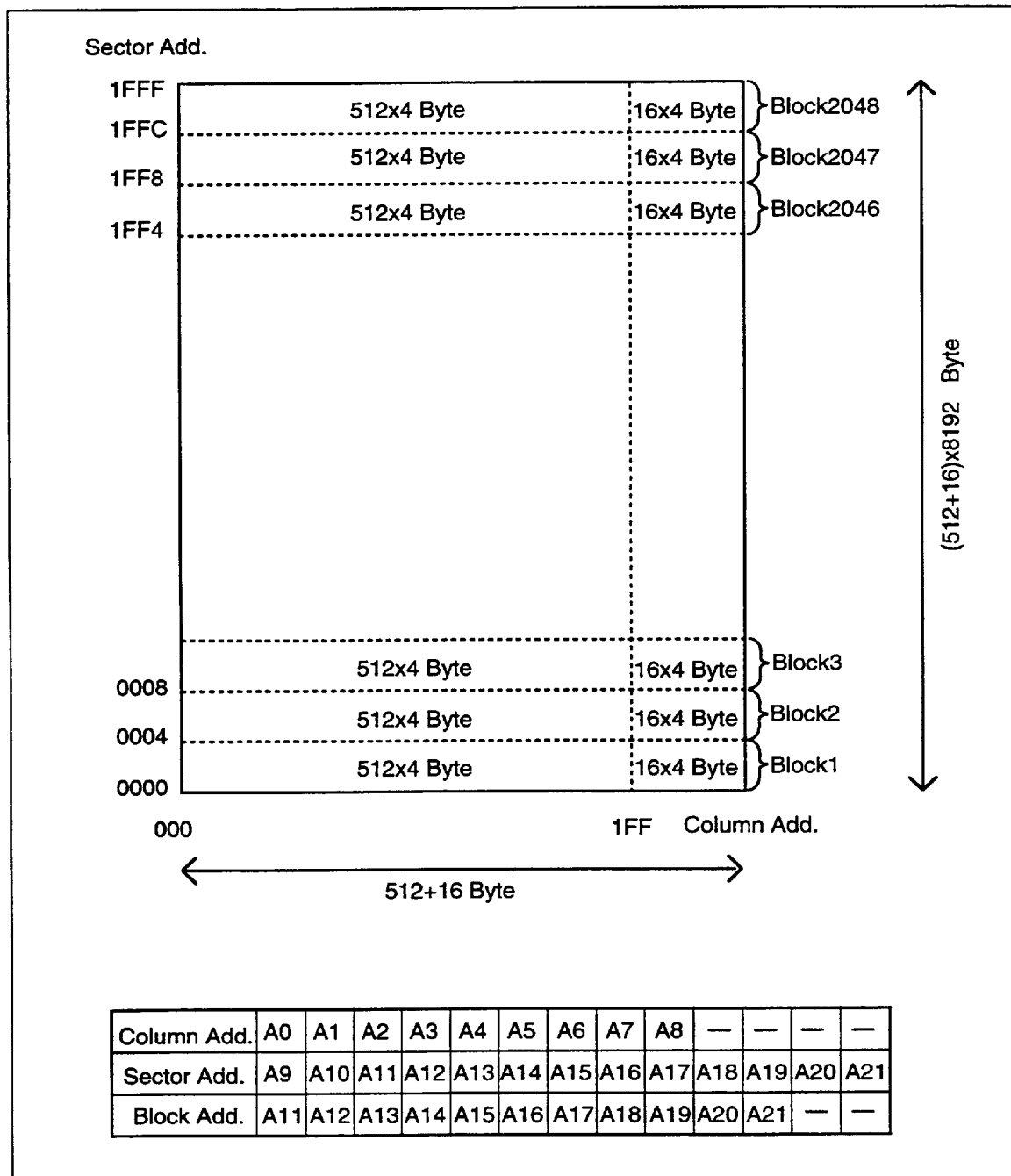
Pin name	Function
A0 - A21	Address
I/O0-I/O7	Input / Output
CE	Chip enable
OE	Output enable
WE	Write enable

Pin name	Function
Vcc	Power supply
Vss	Ground
Ready / Busy	Ready / Busy
RES	Reset
SC	Serial Clock

Block Diagram



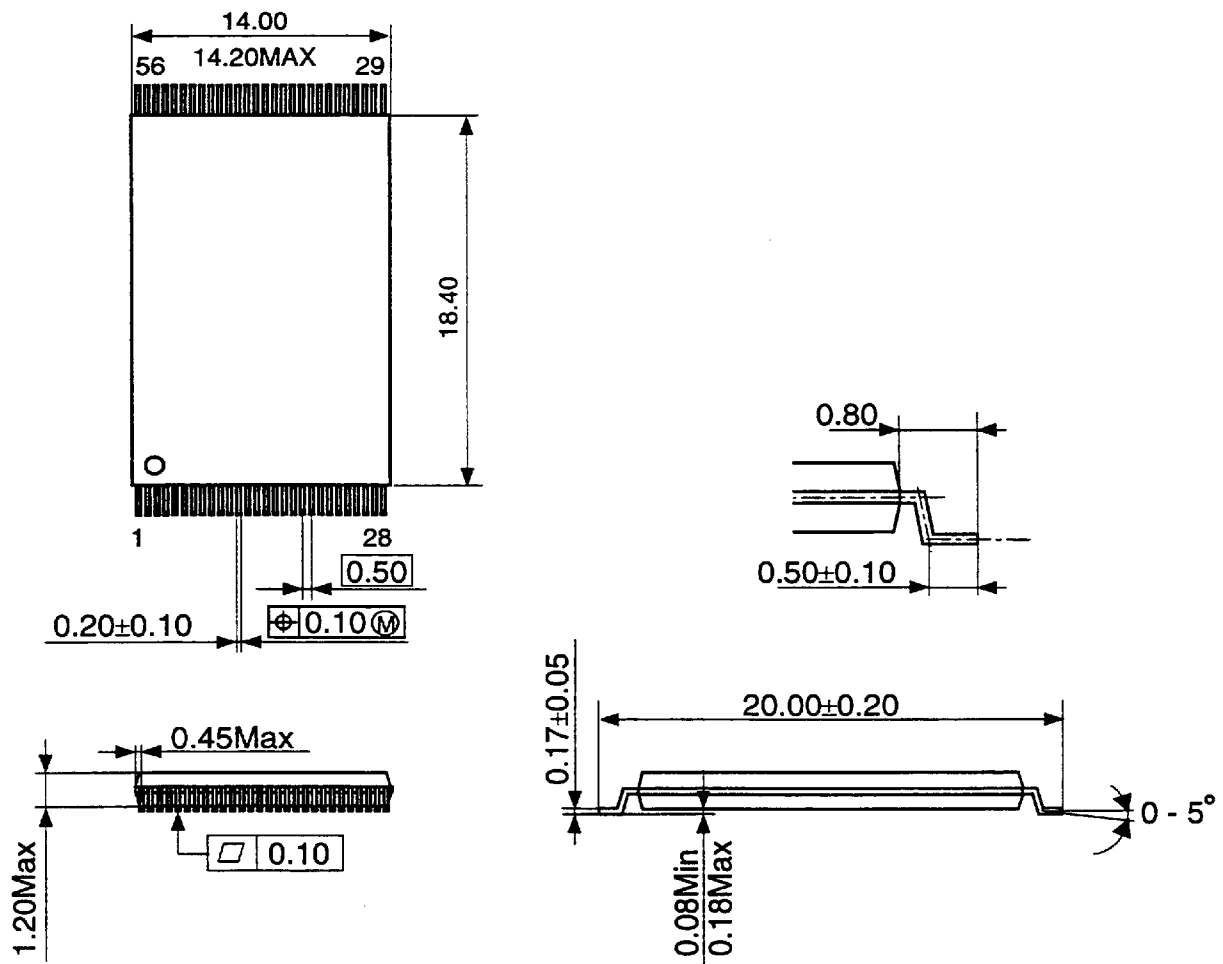
Memory Map & Address



Package Dimensions :

HN29W3221 Series

Unit: mm



m13T035