



2G Bit (16Mx16x8Banks) DDR2 SDRAM Memory

Revision No.	History	Draft Date	Remark
Rev 00	Initial Draft	Oct. 2011	Preliminary



2G Bit (16Mx16x8Banks) DDR2 SDRAM Memory

<Package Features>

- Operating Temperature : 0 ~ 85
- 119-ball FBGA Type - 10mm x 13mm, 0.8mm pitch

<DDR2 SDRAM Features>

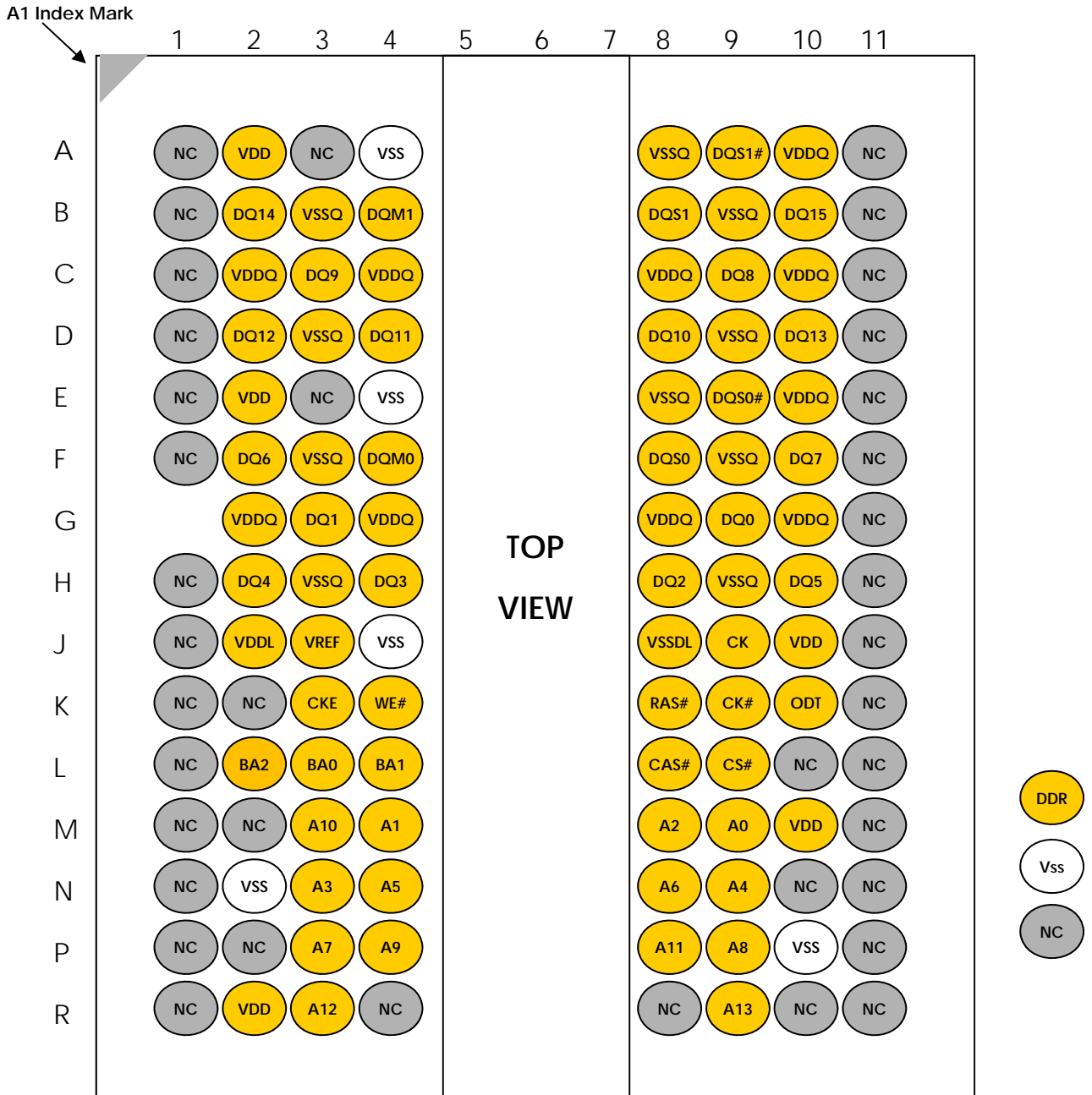
- **Density:** 2G bits
- **Organization :** 16M × 16 bits × 8 banks
- **Power supply:** 1.8V ± 0.1V
- **Data rate:** 667/800Mbps (max.)
- **8 internal memory banks**
- **Programmable CAS Latency:** 3,4,5
- **Programmable Additive Latency :** 0,1,2,3,4,5
- **Write Latency =** Read Latency -1
- **Programmable Burst Length :** 4 and 8 Programmable Sequential / Interleave Burst
- **OCD (Off-chip Driver Impedance Adjustment)**
- **ODT (On-Die Termination)**
- **4n-bit prefetch architecture**
- **Data-Strobes :** Bidirectional, Differential
- **Auto-Refresh and Self-Refresh**
- **Strong and Weak Strength Data-Output Driver**
- **2KB Page Size**
- **7.8us max. Average Periodic Refresh Interval**



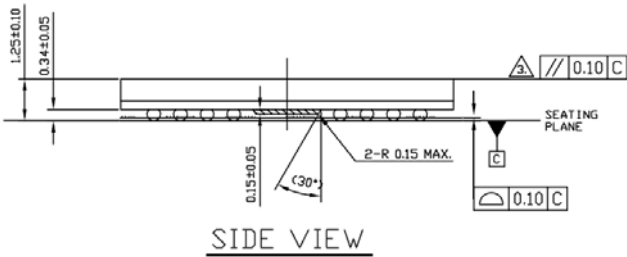
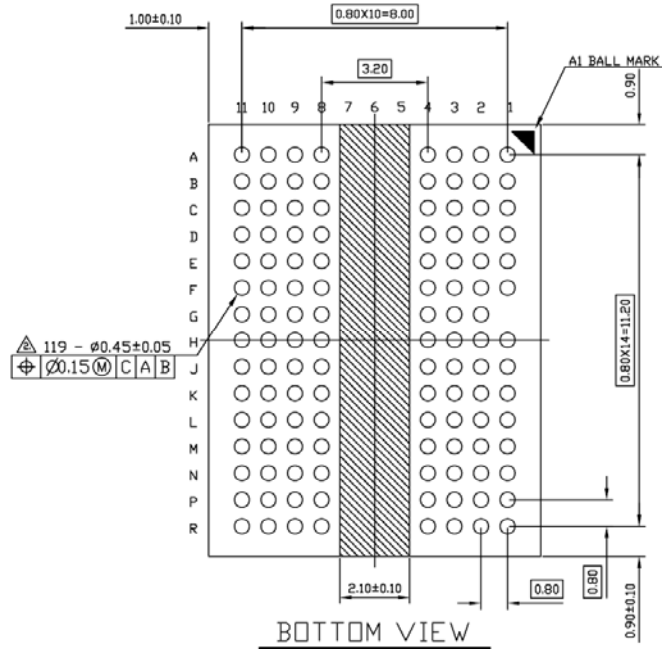
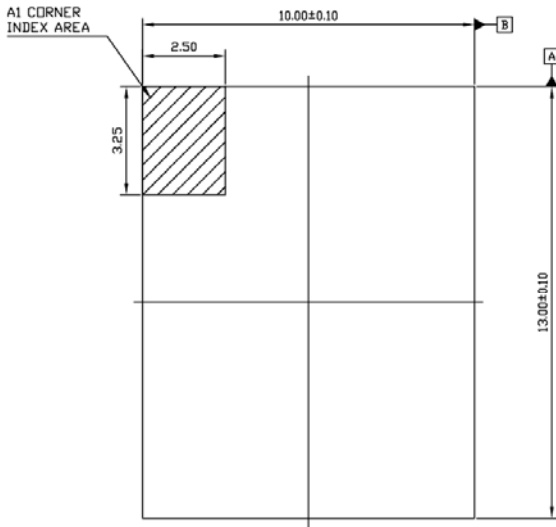
Product Information

Part number	DDR2 SDRAM				Package (FBGA)
	Density	Voltage	Bus Width	Speed	
MBNJD16MHB-XX	2G bit	1.8V	x16	667/800 Mbps	10x13mm 119 ball

PIN CONFIGURATION(10.0x13.0mm, 119-FBGA)



Package Drawing(10.0x13.0mm, 119-FBGA)



Description
FBGA 119BALL
Dimension
10.0mm x 13.0mm x 1.35mm

- 1. ALL DIMENSIONS are in Millimeters.**
- 2. POST REFLOW SOLDER BALL DIAMETER.**
(Pre Reflow diameter : $\varnothing 0.45 \pm 0.02$)
- 3. TOLARENCE INCLUDES WARPAGE.**

**PIN DESCRIPTION**

Pin Name	Function
A0~A13	Address Inputs
BA0, BA1, BA2	Block Select Address
DQ0~DQ15	Data Input/Output
DQS0, DQS0#	Lower Data Strobe
DQS1, DQS1#	Upper Data Strobe
CS#	Chip Select
RAS#	Row Address Strobe Command
CAS#	Column Address Strobe Command
WE#	Write Enable
DQM1, DQM2	Input Mask
CLK	Clock Input
CLK#	Clock Input
CKE	Clock Enable
VREF	Input Reference Voltage
VDD	Power Supply
VDDQ	Power for DQ Circuit
VSSQ	Ground for DQ Circuit
VDDL	Power for DLL
VSSDL	Ground for DLL
ODT	On-Die Terminal Control

Pin Name	Function
VSS	Ground
NC	No Connection



Ordering Information

